amateur radio

Vol. 36, No. 4
APRIL
1968

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"AMATEUR RADIO"

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APRIL 1968
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CONTENTS

Page

Technical Articles:—

Additional Notes on Transistor Regulated Power Supplies 10
A Handy D.C. Supply for the Bench 7
Single Loop Triband Cubical Quad Element 3
SSB:
Hamilton SSB Gathering 13
Speech Compression for Exciters 13
Transistor Radio Noise Limiter 9
Using a Phase Comparator 12

General:—

Correspondence 19
Federal Comment: Region III. Congress 2
Moon-Bounce Schedule 16
New Awards Manager 21
New Call Signs 11
New Supra High Frequency Record Claimed 9
Obituary 22
Prediction Charts for April 1968 11
Presentation of Merit Award to VK3ATN 22
W.I.A. D.X.C.C. 17

Contests:—

Contest Calendar 19
VK-ZL-Oceania DX Contest 1967 Results 15

Notes:—

DX 17
Federal and Divisional Monthly News Reports 21
Publications Committee Reports 16
SWL 18
VHF 19

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REGION III. CONGRESS

Easter 1968 and the Federal Convention in Sydney will have more than the usual significance for the Wireless Institute of Australia for, by the time this is read, final preparations will have been made to receive visitors from the National Amateur Societies of Japan, Philippines, New Zealand and U.S.A.

Sydney and the New South Wales Division will be hosts for the inaugural meeting of the Region III. I.A.R.U. Congress which was initiated by Federal Executive following discussions by Federal Council at Hobart last year.

In many respects this meeting can be likened to the initial meeting of what became the I.A.R.U. nearly 45 years ago when nine nations met in Paris to discuss the formation of an international association of Amateurs. Although techniques have changed, the original concepts are still as true today as in 1924—"the affecting of co-operative agreements between the National Amateur Radio Societies of the world on matters of common welfare; the advancement of the radio art; and the representation of two-way Amateur Radio communication interests in international communication conferences."

However, with the formation of the I.A.R.U. accomplished, national societies in other parts of the world have found that mutual co-operation and unified action within their own Regions can lead to a better understanding and possible solution of the problems facing the Amateur Service—convention in Region I., i.e. Europe-Africa, and in Region II., i.e. the Americas, have become, in recent years, regular affairs with the status of Amateur Radio being the better for these meetings.

Region III.—our part of the world—is unique. We are isolated from our neighbours by history and geography; we are part of a Region with a small Amateur population, yet it is significant that three national societies are sending two delegates to this, the inaugural meeting of Region III. It is unfortunate that other societies have not been able to be with us, but we understand their problems.

What then are the reasons for this spate of activity and what does this Congress hope to achieve? The reasons for the activity have been clearly stated in detail in earlier issues of this journal, but let us refresh your memory.

At the next international conference, the Amateur Radio Service, like all other users of the radio frequency spectrum, may be required to rejustify its frequency allocations. Whilst the Service has been well supported by some countries who recognise the benefits derived, this **support can be expected to continue only so long as the Service compares favourably with other contenders for frequency space.**

The Amateur Service has not received unqualified support from all countries, many of them claiming that other radio services are of greater importance and that allocations to the Amateur Service should be reduced or discontinued. **This problem is of particular concern to new and developing countries** which find that few frequencies are available to them for their varied communication needs.

It is, therefore, vitally important that all administrations briefing delegates for an international conference have a sound understanding of the **values** of the services they are asked to support.

FEDERAL COMMENT

The basic, immediate, and ultimate aim of this Congress, and indeed the preoccupation of any Regional Congress, is to promote, establish and maintain continuing Amateur activity in all countries so that the recognition of Amateur technological and socialogical contributions are justification for continued existence.

How this can be done will be the immediate concern of the delegates in Sydney at this Congress, but it can be expected that discussion will include matters of finance, establishment of technical and educational assistance, and other details vital in the implementation of such a far reaching and important **goal.**

For our part, we see no alternative to a plan for continuing support to our neighbouring Amateur Societies. It is a plan that does not come cheaply and is made more urgent by the belief that some I.T.U. conferences dealing with frequency allocations will be on a Regional basis.

If a Region III. I.T.U. conference was held now, the fate of presently held Amateur assignments in this Region could well be in jeopardy because Amateur orientated administrations would be in the minority—the threat to our allocations could well be within our own Region!

We have established an I.T.U. fund to send an observer to any I.T.U. conference dealing with Amateur affairs, but this is not enough. With the formation of a Regional association this Easter we must continue our personal contacts, and in the same way that Japan, New Zealnd and the Philippines were able to send delegates to Australia, we too, must continue the work started. We must be prepared to finance and send W.I.A. representatives to future gatherings held elsewhere in this Region, and at the same time finance and implement Region III. assistance programmes.

PETER D. WILLIAMS, VK3IZ,
Asst. Federal Sec., W.I.A.

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SINGLE LOOP TRIBAND CUBICAL QUAD ELEMENT

Triband Aerial Principle and Some Applications

H. F. RUCKERT, VK2AOU*

WITH the present sunspot cycle near its peak, DX is again possible on 20, 15 and 10 metres. About fifteen years ago only those few Amateurs could successfully work DX who had plenty of real estate for an antenna farm or had enough engineering ability and cash to build a tower with three yagi beams in Christmas tree fashion stacked on top of each other.

With the last sunspot maximum a number of economy style triband aerials were invented, known by the call sign of the designers: W3DZZ, DL1FK, G4ZU, various versions of these aerials and the one the writer described, which is called VK2AOU beam in Europe. All these beams were described by the proud owners of large full size aerials as "compromise", but we are now convinced that some are a very good compromise, and top DXCC results have been achieved with them. In the meantime about 70% of all successful DX contacts are being made with these shortened beams.

The cubical quad has in recent years joined the list of excellent DX aerials, but its popularity is only limited by engineering problems involved to put up and rotate such a monster spider web. A mini-quad would in many cases be the answer, especially if three-band resonance could be had with one wire loop per element.

Experience has shown that an effective aerial is more important than transmitter power (within resonable limits). Not only the measured or calculated aerial gain is important. This figure would not explain sufficiently the DX results obtainable with a beam compared with a ground plane or dipole. The beam brings less noise, less QRM and, if high enough, places the radiation in the right direction to obtain maximum reflected power from the ionosphere.

Knowing that the successful DXer needs some sort of beam, the problem amounts in most cases to finding a reasonable compromise between DX ability of the aerial on the one side and weight and size reduction on the other side. We like to live in peace with the XYL, the neighbours and the local council. That means our aerial must not be considered as dangerous or as an eye sore and it must not hang over the fence of our 50 x 150 ft. block half of which is already covered by buildings. With these limitations in mind, to which we have to add cost and difficulties of erecting the supporting structure and the rotor, most of us will not be in the position to put up a full size 20 metre beam (yagi) or a cubical quad. A compromise, economy style or mini aerial is therefore in most cases the only way out.

The following description of a Triband Aerial Principle may be of particular interest because it can be applied to wire dipoles, ground planes, yagi beams and cubical quad aerials. The writer developed the principle about ten years ago. It was published in a number of magazines (see References) and in the antenna book by DM2ABK.

For the benefit of those who were not with Amateur Radio ten years ago, the principle and its development will be briefly repeated, and the second part describes aerials which were developed in recent years by DJ2UT and the writer. Early critics have been satisfied by now that this aerial works. VK2AOU won 1st place for N.S.W. phone section 1957 VK-ZL Contest. VK2AOU won 1st place for Australia, phone section, in the W.A.E.D.C. Contest in 1958, DL-8NU made DXCC with 20 watts with the VK2AOU beam, and DL3GY worked 255 countries in 1966 with this beam.

About one hundred of these aerials are being used in central Europe, most of which were built by DJ2UT.† These aerials were two and three element yagis with the special triband tuning sections in the element centres using a single co-ax. feed line. A number of ground plane aerials using this tuning method are also in use, and cubical quads will follow soon.

Interesting features are that these aerials do not respond to harmonics, they have only the desired resonances. They are only shortened at the lowest operating frequency, full size or more at the medium frequency and much longer at the highest frequency. They have no heavy blocking tuned circuits near the element ends. These are the main differences comparing this design with the now popular W3DZZ aerial, which are also shortened at the medium frequency, and which respond to undesired frequencies.

THE MULTIBAND TUNING PRINCIPLE

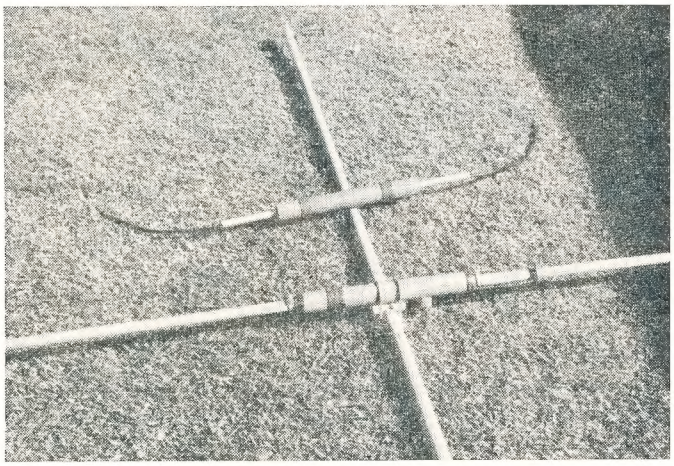
Fig. 1

Dipole features:
- Wavelength: λ.
- Fundamental resonance freq.: f_{r1}.
- Dipole length: $\lambda/2$.
- f_{r1} (Mc.) $= 300 \div \lambda$ (m).

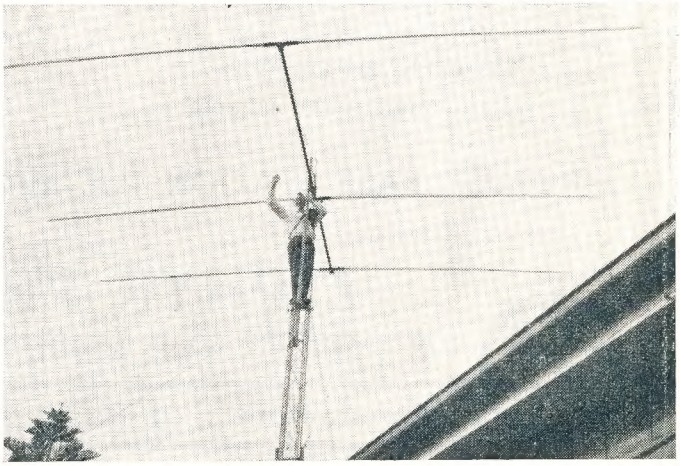
The dipole has the usually unwanted harmonic resonances at $3xf_{r1}$, $5xf_{r1}$, etc.

* 25 Berrille Rd., Beverly Hills, N.S.W., 2209.

† Walfried Sommer, 7809 Denzlingen, Kandel Str. 35, Germany.



Radiator element mounted to boom of VK2AOU's three element triband beam. Note the coil tuning rings. Director tuning section lies behind, not yet mounted. Tuning section from DJ2UT. The cable type tuning capacitors of the director tuning section can be seen.



Beam 30 feet up on not yet cranked up steel mast. Junior op. on mast.

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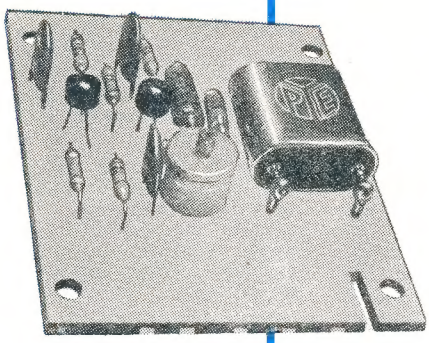

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Fig. 2

Dipole electrically lengthened with loading coil—

$$f_{r2} < f_{r1}.$$

Fig. 3

Dipole electrically shortened with capacitor at centre—

$$f_{r3} > f_{r1}.$$

Both these loaded dipoles have also odd harmonic resonances.

Fig. 4

The series tuned circuit behaves similar to the dipole, but only the fundamental resonance is found, as can be shown with a grid dip meter (g.d.o.).

Fig. 5

The parallel tuned circuit has only the fundamental resonance. f_r is in both cases:

$$f_r = \frac{1}{2\pi\sqrt[2]{L \times C}}$$

FIG.1. DIPOLE at f_{r1}.

FIG.2. DIPOLE at f_{r2}.

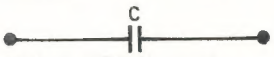


FIG.3. DIPOLE at f_{r3}

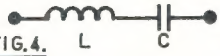


FIG.4.

FIG.5.

TWO-FREQUENCY TUNED CIRCUIT (Mutliband Tank)

Fig. 6

The parallel combination of a series and parallel tuned circuit has been popular in transmitters, because with suitable components a frequency range of 3 to 30 Mc. could be tuned without changing the coils. This circuit shows always two simultaneous resonances, f_{ra} and f_{rb}, which are not necessarily harmonically related to each other.

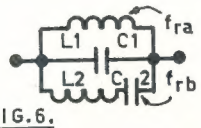


FIG.6.

FIG.7.

Fig. 7

Two-band Aerial: The dipole replaces the series tuned circuit shown at Fig. 6. L1 and C1 may have any suitable form. C1 may be a piece of cable of the required capacity, but it is **not** necessary to tune this cable to a particular frequency (G4ZU claim, switching stub). The resonance frequency f_{ra} of L1 and C1 is usually somewhere between the operating band frequencies (with the dipole element halves disconnected).

The two-band dipole may have different forms:

(a) A dipole of wire or tubing.
(b) A ground plane radiator and radials.
(c) Any yagi beam element, and any number of these.
(d) A loop of a cubical quad aerial element, any number of these.

These combinations have always two resonances simultaneously, and can be tuned to work on two bands. The full dipole length is effective on both bands. No unwanted or harmonic resonances occur (3rd, 5th, etc.). L1 may be a closed stub or loop or coil. C1 may be a piece of cable, an adjustable or fixed capacitor.

Fig. 8

The one-loop two-band cubical quad element may be tuned for the required radiator, reflector or director frequencies.

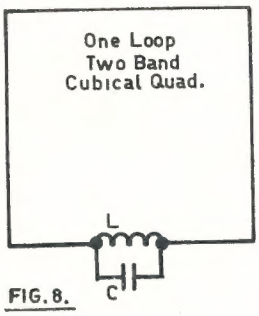
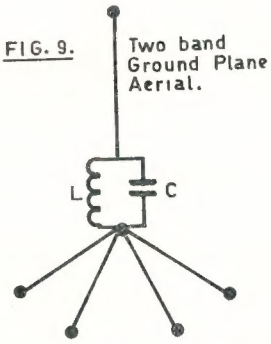


FIG.8.

Fig. 9

Also in the case of the two-band ground plane aerial, L can be adjusted to tune the lower operating frequency, whilst C is more effective to tune the higher frequency.

FIG. 9.



THE TWO FORMS OF THREE-FREQUENCY TUNED CIRCUITS

Figs. 10 and 11

Three simultaneous resonances, f_{ra}, f_{rb} and f_{rc}, occur for any L1-C1, L2-C2 and L3-C3 value combination. The Type-A and Type-B versions give similar results. The three resonances are not necessarily harmonically related nor do they have to be evenly spaced. All resonances may fall within a frequency ratio Δ f of less than 1:2 or over 1:3.

TRIBAND AERIALS

The series tuned circuit L3-C3 of the Type-A or Type-B circuit can be replaced by any dipole form, like a simple dipole, the yagi beam element halves, a single loop of a cubical quad, and the radiator and radials of a ground plane aerial. The dipoles are connected to point I and II of the tuning section.

Figs. 12 and 13

Typical conditions:

f_{rb}: Between high f-band and medium f-band (without dipole).
f_{ra}: Between medium f-band and low f-band (without dipole).
Dipole: Resonance (without triband tuning section) between medium f-band and about 80% of low f-band.

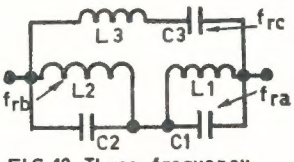


FIG.10. Three frequency tuned circuit.

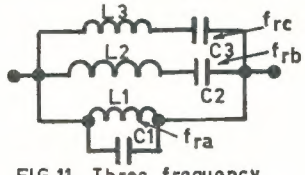


FIG.11. Three frequency tuned circuit.

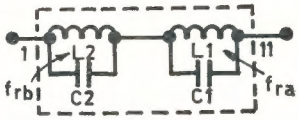


FIG.12. TYPE. A.

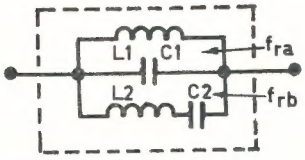


FIG.13. TYPE. B.

Fig. 14

The Type-A or Type-B tuning sections (Fig. 12 and Fig. 13) form with the dipole element halves a triband dipole or any element of a triband yagi aerial. Similar elements may be tuned to work as director(s), radiator or reflector(s). The radiator or other elements as well may be fed.

FIG.14.

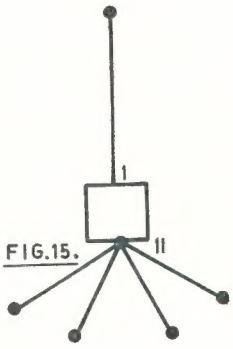


FIG.15.

Fig. 15

A triband ground plane aerial. Type-A or Type-B tuning sections may be connected to I and II.

Fig. 16

Triband v.h.f. beam element with Type-B tuning section in symmetrical form. Bands at 64 Mc., 102 Mc. and 195 Mc. are covered with this set-up. The tuning inductances are short wire or tubing loops.

Fig. 17

A single loop cubical quad triband element which can be tuned to three bands with the tuning sections shown in Fig. 12 or Fig. 13. Such a cubical quad has only 1/4 the weight and wind resistance of a full size three loop cubical quad of the same mechanical strength.

FIG. 16.

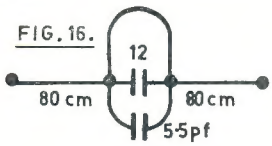
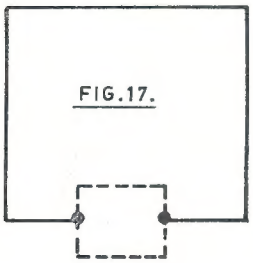


FIG. 17.



The mechanical and installation difficulties are many times smaller, so is the cost of the mast, rotor and maintenance. Yes, it is a compromise and the gain is less, but it still puts the signal in good DX company. It is the quad that will be tolerated at many more locations than the big brother presently is. This quad could be used as indoor aerial strung at two opposite room walls. The tuning sections can be switched to change the reflector or radiator function, to make the quad usable in two directions.

The quad is known to be quite effective at less than one wavelength in height, which is the main reason why many quads are better than too low yagi beams.

Triband Tuning: Low f-band resonance depends mainly on dipole length and L1.

Medium f-band resonance depends mainly on C1 and L2.

High f-band resonance depends mainly on C2 and L2.

The aerial must be efficient, because correctly built tuning sections do not become warm, a low v.s.w.r. can be obtained. The radiation pattern shows deep nulls at the sides and the normal beam front-to-back radiation ratio.

EXPERIMENTS WITH TRIBAND ONE-LOOP CUBICAL QUAD ELEMENTS

Example: Desired band frequencies: 80 Mc., 60 Mc. and 40 Mc. Midband frequencies for tuning section (alone) 70 Mc. and 50 Mc.

Fig. 18

a and b—
- L1—10 turns, 1.7 cm. diameter, 3 cm. long.
- L2—6 turns, 1.7 cm. diameter, 3 cm. long.
- C1 and C2—Trimmer, 10-40 pF.

(a) Wire loop = 4 x 1 m. attached to I and II.
- Resonances of f_{ra} = 52 Mc., f_{rb} = 70 Mc. (without loop).
- Resonances with loop: 40 Mc., 60 Mc. and 80 Mc.

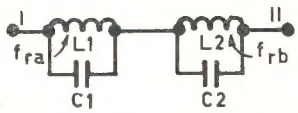
(b) Wire loop = 4 x 1.25 m. attached to I and II.
- Resonances of f_{ra} = 52 Mc., f_{rb} = 84 Mc. (without loop).
- Resonances with loop: 40 Mc., 60 Mc. and 80 Mc.

c and d—
- L1—6 turns, 1.7 cm. diameter, 2.5 cm. long.
- L2—4 turns, 1.7 cm. diameter, 1.8 cm. long.

(c) Wire loop 4 x 1 m. attached to I and II.
- C1 = 38 pF., C2 = 18 pF.
- Resonances of f_{ra} = 42 Mc., f_{rb} = 74 Mc. (without loop).
- Resonances with loop: 40 Mc., 64 Mc. and 80 Mc.

(d) Wire loop 4 x 1.25 m. attached to I and II.
- C1 = 32 pF., C2 = 16 pF.
- Resonances of f_{ra} = 44 Mc., f_{rb} = 82 Mc. (without loop).
- Resonances with loop: 40 Mc., 54 Mc. and 80 Mc.

FIG. 18.



Example: One-Loop Triband Quad Element for 14, 21 and 28 Mc.

Fig. 19

Coil former—3.7 cm. diameter, 8 cm. long.

L1—7 turns, 1.6 cm. long.

L2—5 turns, 1.1 cm. long.

L3—4 turns, 1 cm. long.

f_{ra} = 17 Mc., f_{rb} = 23 Mc. (without loop).

Wire loop—4 x 3.5 m. = 15 m. long, attached to I and II.

Spacing of two one-loop elements: 2.5 m.

V.s.w.r. over all three bands below 1:2.

Type-A or Type-B tuning sections may be used with similar results.

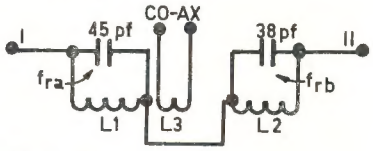
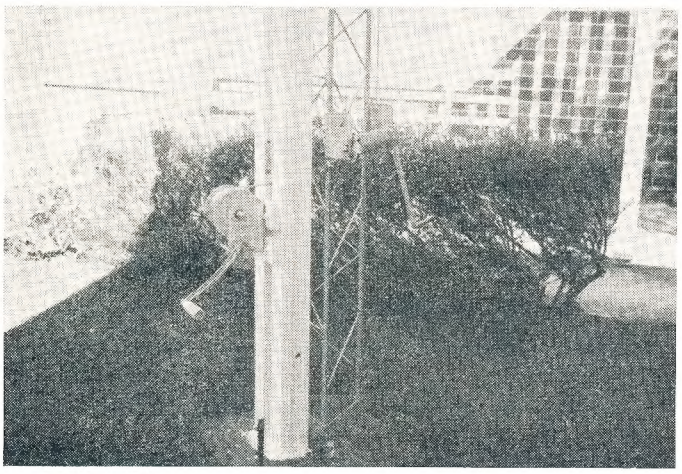


FIG. 19.

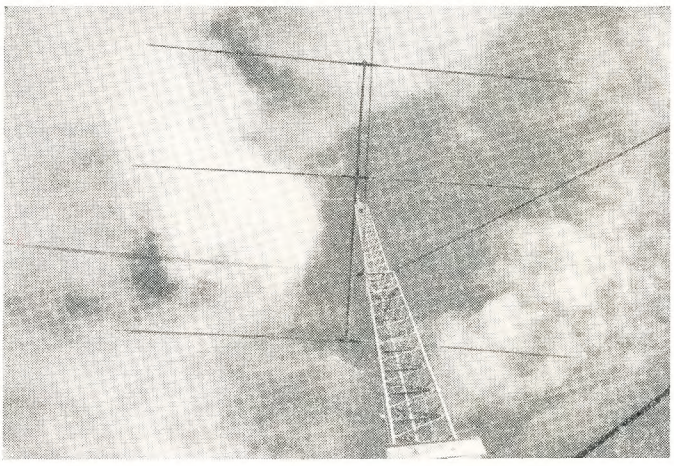
FEEDING METHODS FOR MULTIBAND AERIALS

A simple link coil as shown above may be used. The earlier versions of the VK2AOU beam made by DJ2UT had this link coil and a single co-axial feed line was used. He developed more recently a two element feeder method with a crossed over connecting feeder, to feed also the reflector, which made the front-to-back ratio (reflector tuning) less dependent on the beam height

(Continued on Page 10)



Steel mast with crank up winch, right. Left, 12 feet supporting mast with tilt over winch (boat winch).



Three element triband beam at VK2AOU with central tuning sections from DJ2UT about 55 feet up. A TR-44 rotor is now in use.

A HANDY D.C. SUPPLY FOR THE BENCH

ROLF B. PETERSEN, VK5ZIE

ALONG with many other Amateurs, I felt the need for a flexible general bench supply for development and testing of a wide variety of transistor circuits.

After some thinking and looking around, I came across a Trimax TP1550B transformer, which seemed to be just begging to be put into such a supply. It has four 6.3v. windings, one of which is centre tapped, and one of 5v., all at 3 amps. r.m.s.

I thought that it would be best to keep things quite simple and that a few hours of development and a few more for the final build up would be sufficient. Three months later! I had what seems to be a very useful piece of gear, only, it's not very simple. In fact, when I finally finished it, we will have a fairly ambitious project.

As it stands its has no overload protection, so some care is needed when using it. The overload protection will be added later, probably when I blow up some transistors.

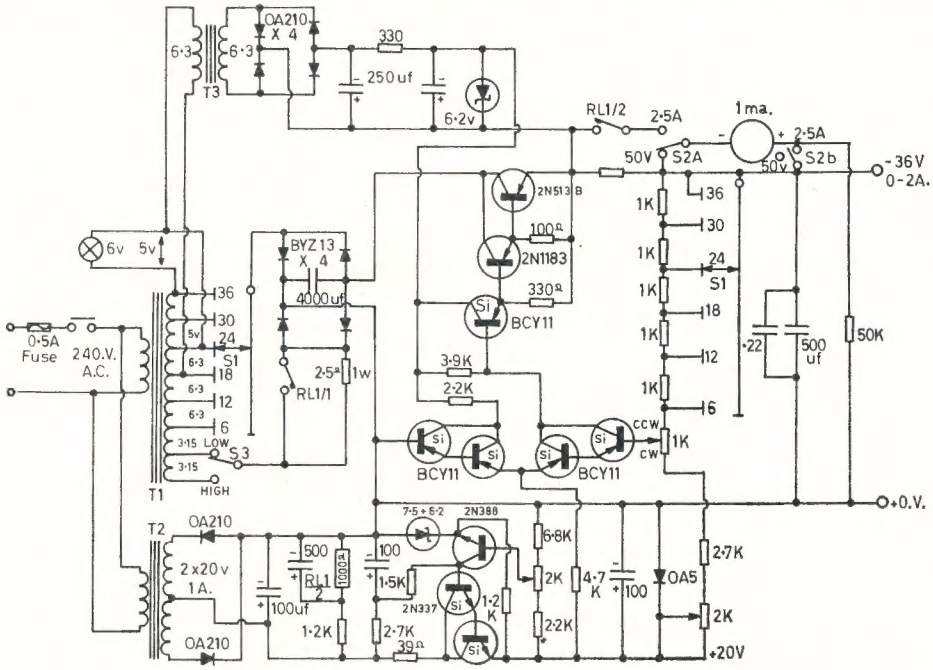


FIG. 1. REGULATED POWER SUPPLY.

Performance is fairly good. The supply will deliver any voltage between zero and 36v. at currents up to two amps. Regulation is better than 0.25%, temperature stability is about 0.1%/°C. or better.

One useful feature is the fact that one can simulate flat batteries by connecting a small value variable resistor in series with the output and adjusting the volts to suit.

The transistors used in the unit are types that had been on hand. Other types can be used, of course, as long as their characteristics are similar. It is important to use silicon transistors where indicated, as the high leakage current (I_{CBO}) of germanium ones will upset the works.

The small transistors should all be mounted so that they won't be heated by warm components, e.g. power transistors, rectifiers and transformers. The same of course goes for electrolytic condensers. Easy and ample airflow through the unit should be provided.

Now let us have a look at the circuit diagram. The first thing we see here is that there are three supplies. The one in the middle is the main supply which carries the load, and the two are auxiliaries.

The regulated supply at the bottom provides a stable +20v. rail which is used as the reference source. The tranny was hand wound on an existing core.

From the one on top we get 6.2v. which is riding on the output rail and is used as collector supply for the amplifier transistors and the first emitter follower. This is known as a pre-regulator and it greatly improves regulation of the output voltage. The transformer (T3) can be a t.v. booster. If a main transformer (T1) with an additional 6.3v. winding can be bought or wound, so much the better.

Back at the main supply, we see that the voltage which is applied to the bridge rectifier is increased in step with the selected output voltage. I did this to keep the dissipation in the 2N513B at a comfortable level.

Also in that part of the circuit is a 2.5 ohm resistor, which is shorted out after 0.4-0.5 sec. It limits the switch-on surge current to an acceptable level, thus enhancing the life expectancy of the four BYZ13s and the 2N513B a little. A 4,000 uF. 50v. condenser is used as reservoir and from it the regulator 2N513B is feeding the load through 40 megohms which gives the meter a 2.5a. range. A spare relay contact at this point keeps the meter disconnected until the first charge-up surge into the 5,000 uF. condenser has passed.

A d.p.d.s. switch serves to convert the meter to a voltmeter and, having a 50v. range, it then monitors the voltage right at the output terminals. This is also the sensing point for the error amplifier. Switch 1b selects a suitable tap on the 1K resistor chain for every chosen output voltage. The 1K pot. at the base of the first amplifier is a front-panel control and sets the exact voltage at the output. It is possible, on the higher ranges, to turn the output voltage down beyond the next lower step, i.e. from 24v. to below 18v. This should not be used as it may overload the 2N513B and, if driven too far, will result in inferior regulation. However, the full range of 6v. from one step down to the next can be confidently used to the full two amp. capacity.

The bottom end of the chain goes via 2.7K and a 2K trimpot. to the +20v. reference rail. On initial adjustment the output selector S1 is set to 6v. and the 2K trimpot. is then used to set the output to just over 6v. with the 1K front-panel control fully c.w. Before that, of course, the 20v. reference supply must be adjusted.

The error amplifier is a differential type and uses four BCY11 transistors in Darlington connection. These four transistors must be thermally strapped together. To do this I used four Philips mounting clips and screwed them back to back in a sandwich fashion. No other heat sink is required at this place.

The 513B is mounted on a commercial heat sink which is insulated from the remainder of the unit. There is no mica insulator between the 2N513B and its heat sink, for better heat transfer. This transistor is driven by two emitter followers, a 2N1183 and a BCY11. The leakage current of the transistor used in place of the 2N1183 must be low, even at high ambient temperatures, to enable the output to go down to zero.

Turning now to the +20v. reference supply, we see that it is a straight forward stabilised supply. It contains the relay and time delay RC combination. There is an OA5 diode included which is normally off and comes into action when the unit is switched off. What happens is that upon switching off, the reference supply discharges more quickly than the 5,000 + 4,000 uF. condensers in the main supply and they will charge the 1,000 uF. condensers in the reference branch the wrong way, which will make the latter ones unreliable after some time. The OA5 prevents the reference rail from going more negative than 0.2 of a volt.

Some experimenting went into the attainment of reasonable temperature

(Continued on Page 16)

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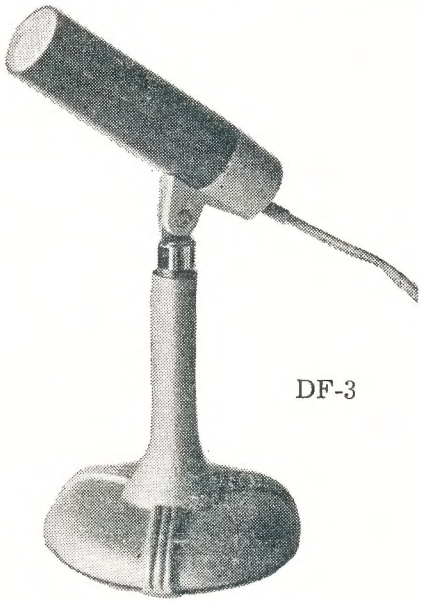

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TRANSISTOR RADIO NOISE LIMITER

ROY HARTKOPF, VK3ZOM*

The popularity of transistor car radios means that many are now being used as tuneable i.f's instead of the older vacuum tube car radio. There is an added advantage that if a transistorised converter is used, one can have a completely portable self-powered high quality receiver. On 6 and 2 metres, noise is as great a problem as ever and this article describes a noise limiter which has given excellent results over the last two years.

Fig. 1a shows a typical transistor detector and 1st audio stage. A jack for audio input is often inserted between C2 and C3. R4 and C4 provide tone control.

Fig. 1b shows the modifications necessary to insert the noise limiter. R4 is used as a voltage supply and controls the level of clipping. C6 prevents the noise limiter from interfering with the a.g.c.

The operation is as follows: The two resistors R5 and R6 establish a d.c. voltage level at the junction of D1 and D2. If R4 slider is adjusted to the same voltage level, both diodes will be on the verge of conduction (only short by an amount equal to their threshold conduction voltage). A positive going spike from the detector diode (which suppresses the negative ones anyway) will block D1 and cause D2 to conduct, thus shorting the spike to earth.

As the slider of R4 is made more positive we have D1 conducting and D2 cut off and the level of the clipping thereby raised. When the slider of R4 is at the earth end (positive earth) there is no clipping at all. When it is at the negative rail end D2 is permanently conducting and D1 is cut off and the receiver is muted.

The advantage of having the shunt diode D2 as well as the series diode D1 is that with D1 alone, if a high voltage positive going spike reached it, the capacitance effect could allow some of it through even though D1 was not conducting. But since D2 short circuits these spikes they cannot reach D1 anyway.

The tone control R4 was used as in most cases there is no space to add an extra control. R5 and R6 should be as high a value as possible and are best adjusted on test for the desired clipping range, and with a positive rail the polarity of the capacitors may have to be reversed. The polarity of D1 and D2 depend on the polarity of the detector diode. They can be any germanium detector, OA95, etc.

TRANSISTOR RADIO NOISE LIMITER

FIG. 1a.

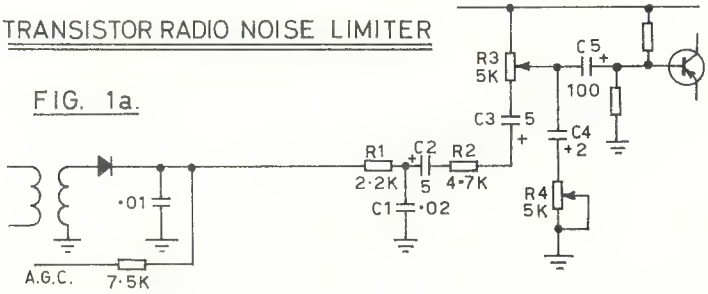
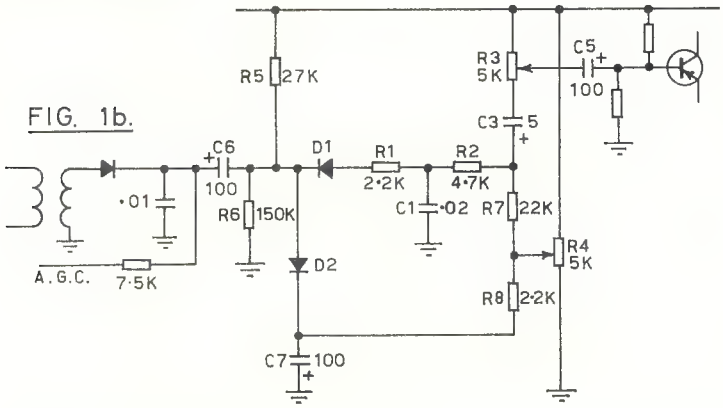


FIG. 1b.

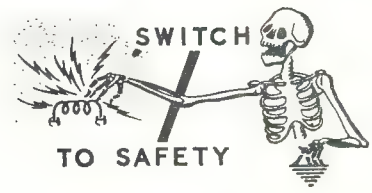


* 34 Toolangi Road, Alphington, Vic., 3078.

NEW SUPRA HIGH FREQUENCY RECORD CLAIMED

VK3AQ has obtained a special licence to radiate transmissions of the order of 300,000 mega mega hertz and is now claiming a record of 700 cm. for a two-way contact using interrupted continuous wave. The final stage uses 100,000 volts on the plate at a current of 300 mA. The plate is made of tungsten and has been placed on silver bearings so that it can be rotated at high speed by an induction field and thus distribute more evenly the tremendous heat liberated and so avoid burning a hole in the anode—so far water cooling has not been used.

The receiver consists of an ultra sensitive silver detector which automatically records the result of the contacts. When ways can be found to amplify satisfactorily at this frequency, longer transmission distances may be possible.



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ADDITIONAL NOTES ON TRANSISTOR REGULATED POWER SUPPLIES

The referred to power supplies featured in "Amateur Radio" in February, April and May issues, 1967. R19 of the power supply (April issue) should be 30 watts, not 3 watts as shown. In Fig. 2 (same issue) the AC127 is shown as a PNP when it is a NPN type, see accompanying diagram. It is suggested

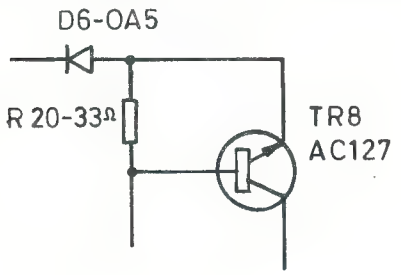

FIG. 2. Correction.

that C6 in the same power supply should be an electrolytic designed for high ripple operation, this applies to the reservoir capacitor in all four types of supplies described in the three articles.

The two power supplies using output voltage sampling may also have a 0.01 uF. capacitor wired across the base-collector of the AC128 control transistor TR2. A paper capacitor may also be placed across the output of all these supplies, should the electrolytic across the output go open all sort of funny effects can occur such as oscillation of the more sophisticated of these supplies.

Now referring to the a.c. supply for the 122 set, R6 is the 1 ohm resistor in the collector lead of the 2N441 transistor and R5 is the 680 ohm resistor between the plate of the VR150 and pin 2 of the Set input. A modification to save one zener diode Z1. The cathode of VR150 can be taken to the 12 volt regulated line which goes to the valve filaments and heaters, etc., on pin 10 or 12 of the Set input. R1 is the 68 ohm 1 watt resistor.

I hope in the future to design yet another type of transistor regulated power supply using a variable duty cycle multivibrator controlled transistor switch operating at a frequency somewhere between 1 kc. and 10 kc. This type of supply would be much more efficient than the preceding ones that I have described. Depending on how experiments go as to when this proposed supply will be presented.

—Rodney Champness, VK3UG.

CO-AXIAL ANTENNA RELAYS CABLES AND CONNECTORS

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Type DK60 standard single-pole change-over	$18.12	$19.25
Type DK60-G standard single-pole change-over with special isolation contact in de-energised position to reduce cross-talk	$20.15	$21.15
Type DK60-2C, same as DK60, but includes external set of double-pole change-over contacts	$20.25	$21.38
Type DK60-G2C, same as DK60-G, but with external double-pole change-over contacts	$21.78	$23.30

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Belling & Lee P734P Co-ax. Cable Plug ..	32c
Belling & Lee L604S Co-ax. Chassis Socket	28c
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SINGLE LOOP TRIBAND CUBICAL QUAD ELEMENT

(Continued from Page 6)

and surrounding objects. A ferrite transformer or cable balun may be used to connect the feeder.

Figs. 20 and 21

The phase relationship of the fields in L1 and L2 vary from band to band, so that too much direct coupling between these coils has to be avoided. It is not necessary, as originally proposed by the writer, that separate link coils and feeder cables be used to couple to L1 and L2. Coupling to the larger coil is sufficient, as found by DJ2UT.

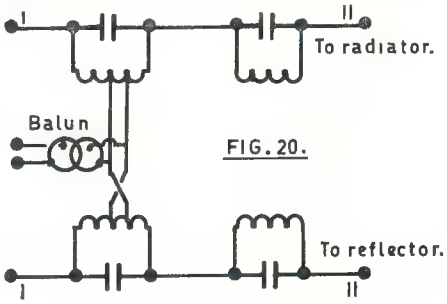


FIG. 20.

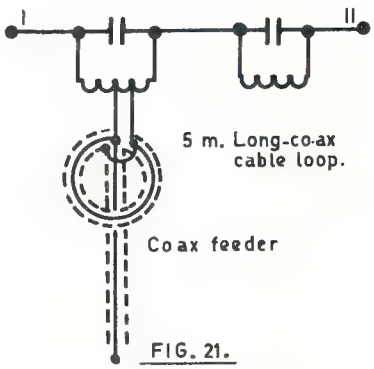


FIG. 21.

SOME PRACTICAL DESIGN FEATURES

DJ2UT used short pieces of co-axial cable as capacitors and they are later placed inside the element tubing. The coils and inner capacitor ends are sealed and moulded in resin. The centre section is about 40 cm. long and has 5 cm. diameter. The tuning of the lowest frequency is carried out by adjusting the element length. The medium and highest frequency are tuned by shifting copper rings more or less over the ends of L1 and L2, which can be done from outside without affecting the sealed coils in any other way.

The writer wishes to thank OM Sommer (DJ2UT) and his co-workers for the very considerable amount of work carried out and the many good and practical ideas which made successful aerials with this triband principle.

REFERENCES

"Amateur Radio" (VK), May and June 1958, by VK2AOU.
"DL-QTC" (DL), March 1958, by VK2AOU.
"Funk-Technik" (DL), No. 16 and No. 17, 1959, by VK2AOU.
"Break-In" (ZL), June and July 1963, by VK-2AOU.
"Antenna Book," by K. Rothammel, DM2ABK, 1963.
"DL-QTC" (DL), June 1964, by DL7BB.
"DL-QTC" (DL), April 1961, by VK2AOU.

NEW CALL SIGNS

DECEMBER 1967

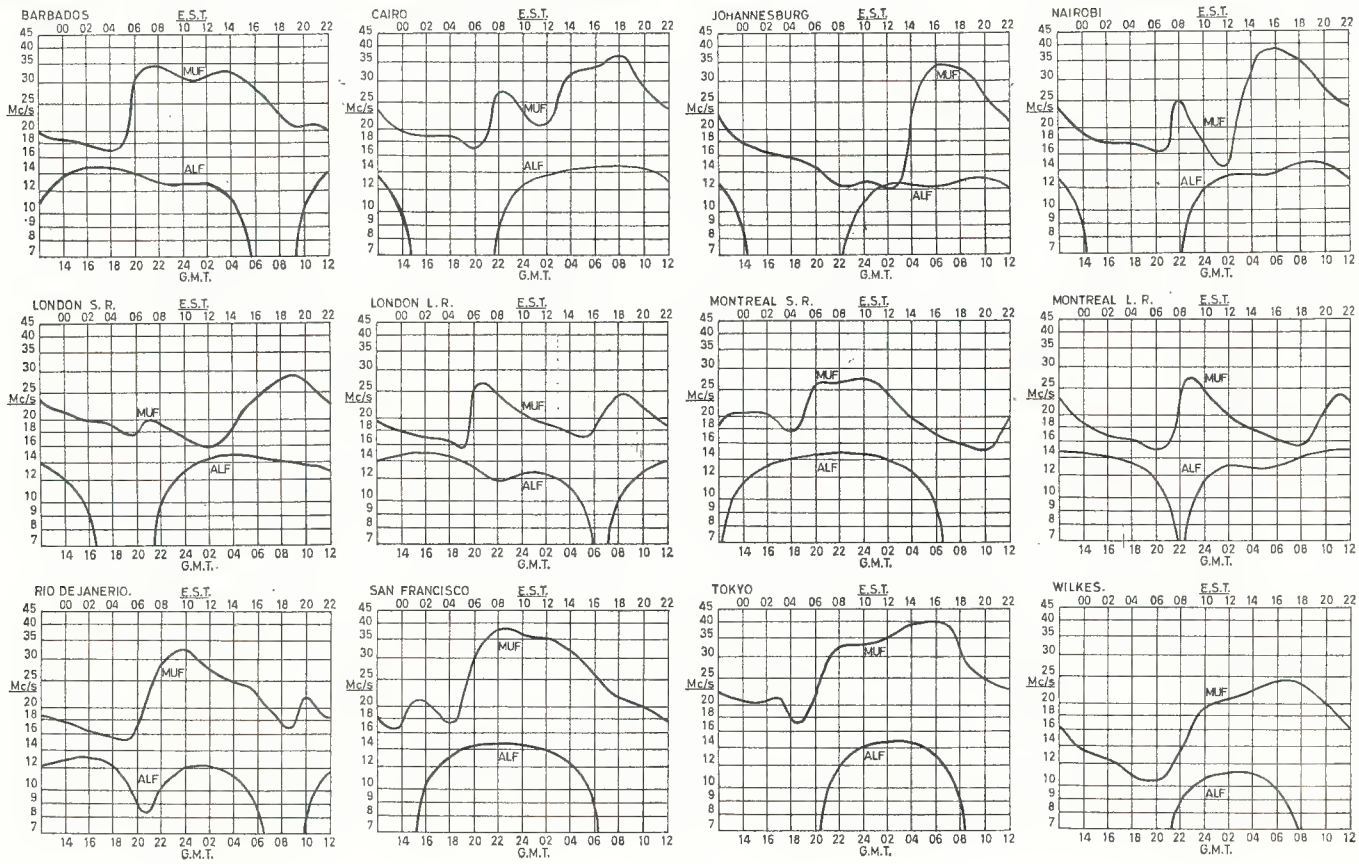
VK1BW/T—W. A. Wilson, 129 Irvine St., Watson, 2602.
VK1ZJF—J. F. Sutcliffe, 4 Wyatt St., Torrens, 2607.
VK2BBS—B. A. Stevens, 58 Wyadra Ave., Harbord, 2096.
VK2BEJ—E. R. N. Jowett, Burringbar, 2480.
VK2BIJ—D. I. Jewell, 17/1265 Botany Rd., Mascot, 2020.
VK2ZHY—B. H. Sheldon, 302 Western H'way, Wentworthville, 2145.
VK2ZIR—A. R. Avery, 11 Raglan St., Mosman, 2088.
VK2ZPP—P. J. Ryan, 58 Wicks Rd., North Ryde, 2113.
VK2ZTQ—R. A. Cameron, 92 Hull Rd., Pennant Hills, 2120.
VK2ZWV—W. Wright, 102 Botany St., Carlton, 2218.
VK3GJ—L. F. Schmidt, 2 Ward St., Ashburton, 3147.
VK3HH—J. D. Morrison, 27 Clonaig St., East Brighton, 3187.
VK3KD—L. Kurcki, 18 Boort St., Broadmeadows, 3047.
VK3UB—J. E. J. Walsh, 34 St. Elmo Rd., Ivanhoe, 3079.
VK3ABN—A. Camp, 98 Orchard Gr., Blackburn South, 3130.
VK3AGF—R. N. Furguson, 23 Floral Ave., East Mildura, 3500.
VK3AIQ—J. Glenn, 1 Plumkett Ave., Ormond, 3204.
VK3AJS—D. J. Slade (Capt.), 32 Westerfield Ave., North Clayton, 3168.
VK3APY—J. H. Wilson, 14 Brook Dr., Altona, 3018.
VK3AXF—J. L. Boyce, 182 Huntingdale Rd., Mt. Waverley, 3149.
VK3AXP—L. J. Kelly, 26 Cambridge St., Belmont, 3216.
VK3AZG—B. Gardiner, 63 Edinburgh St., Clayton, 3168.
VK3ZBB—R. C. Arnold, 41 Grammar St., Strathmore, 3041.
VK3ZFK—R. F. J. Caleo, 8 Ryder St., Niddrie, 3042.
VK3ZKB—K. J. Bond, 61 O'Shannessy St., Nunawading, 3131.
VK3ZMH—R. F. Harris, Harris Gully Rd., Warrandyte, 3113.
VK3ZOT—Traralgon Technical School, Station: Grey St., Traralgon, 3844; Postal: P.O. Box 68, Traralgon, 3844.
VK3ZUV—D. W. Brumley, 32 Faversham Rd., Canterbury, 3126.
VK3ZUX—K. C. James, 61 Northernhay St., Reservoir, 3073.
VK3ZVF—B. P. Cranston, 5 Belvoir St., East Doncaster, 3109.
VK3ZWE—P. Dawson, 34 Ross St., Surrey Hills, 3127.
VK3ZWQ—D. S. McQuie, 16 Clarke Ave., Caulfield, 3162.
VK3ZXD—L. W. Bourchier, 66 Elizabeth St., East Coburg, 3058.
VK3ZXG—J. W. V. Storey, Zig Zag Rd., Eltham, 3095.
VK3ZYC—J. E. Collins, Blackwood Ave., Belgrave, 3160.
VK3ZYJ—D. R. Jones, 389 Lower Heidelberg Rd., Heidelberg, 3084.
VK3ZYW—R. W. McLean, 313 Crompton St., Ballarat, 3350.
VK3ZZC—N. W. McCay, 69 Thames St., Box Hill North, 3129.
VK3ZZN—N. J. Spalding, Station: Flat 1, 12 Munro St., Armadale, 3143; Postal: C/o Post Office, Cressy, 3322.
VK3ZZP—D. J. Pinson, 24 Salisbury St., Essendon North, 3041.
VK4NF—N. Williamson, 129 Esplanade, Cairns, 4870.
VK4TL—J. E. Roberts, Murray's Corner Store, Trinity Beach, via Cairns, 4870.
VK4ZLH—L. C. Hemming, 116 Ninth Ave., St. Lucia, 4067.
VK4ZMR—D. M. Ryan, 30 Richland Ave., Coopers Plains, 4180.
VK4ZYS—Yeronga Street High School Radio Club, Villa St., Yeronga, 4104.
VK5AH—A. H. Brooks, 89 Blight St., Ridleton, 5008.
VK5VU—V. W. Stallan, 43 Daveron Rd., Elizabeth Fields, 5113.
VK5ZKM—K. H. May, 103 Swanport Rd., Murray Bridge, 5253.
VK5ZPK—W. N. Kirby, 34 Churchill Rd., Ovingham, 5082.
VK6AB—E. J. Boudell, 9 Tautog St., Exmouth, 6707.
VK6ER—E. A. Ray, 5 Learmonth St., Exmouth, 6707.
VK6KL—K. L. Miller, 7 Freeman St., Melville, 6156.
VK6ME—M. A. Elliott, 43 Pandora Dr., City Beach, 6015.
VK6ZAG—J. P. Marks, Aquinas College, Manning, 6152.
VK7DE—D. E. Burkinshaw, 30 Philosopher St., Savage River, 7231.
VK8ZDE—H. W. Spaulding, D.N.R.S. Coonawarra, Darwin, 5790.
VK8ZSJ—J. L. Sinclair, Station: "Mandorah," via Darwin, 5790; Postal: C/o. H.F. Broadcast Project, P.M.G. Dept., Darwin, 5790.

CANCELLATIONS

VK2AYS/T—W. A. Wilson. Now VK1BW/T.
VK2ZGN—J. E. Gelston. Transferred Interstate.
VK2ZSC—B. S. Churchill. Transferred Interstate.
VK2ZSU—J. F. Sutcliffe. Now VK1ZJF.
VK3ET—B. F. Farrar. Not renewed.
VK3NS—R. Bennett. Deceased.
VK3VW—V. W. Stallan. Now VK5VU.
VK3AEU—B. A. Stevens. Now VK2BBS.
VK3ATE—R. C. Pulford. Not renewed.
VK3ATV—J. F. O'Toole. Not renewed.
VK3AWR—W. E. Knapp. Not renewed.
VK3ZFG—A. E. Hiscock. Now VK9ZFG.
VK3ZMM—J. W. Cerchi. Not renewed.
VK3ZMY—A. Camp. Now VK3ABN.
VK3ZQI—L. F. Schmidt. Now VK3GJ.
VK3ZSQ—B. Gardiner. Now VK3AZG.
VK3ZTN—D. E. Stackpoole. Transferred to South Australia.
VK3ZVP—L. Kurchi. Now VK3KD.
VK4BH—H. Brown. Deceased.
VK4HG—J. M. Hamilton. Transferred Victoria.
VK4NX—N. Williamson. Now VK4NF.
VK5ZBZ—J. A. Zubrinich. Ceased operation.
VK5ZIJ—A. R. Jenkins. Not renewed.
VK5ZSJ—J. L. Sinclair. Now VK8ZSJ.
VK6ZDJ—K. L. Miller. Now VK6KL.
VK8ZCF—H. Schroder. Transferred to New South Wales.

PREDICTION CHARTS FOR APRIL 1968

(Prediction Charts by courtesy of Ionospheric Prediction Service)



USING A PHASE COMPARATOR

K. C. BICKNELL, VK6ZCB/T*

This article is designed to help many who will be endeavouring to extract telemetry data from the Oscar Australis satellite. The telemetry takes the form of an audio frequency appearing in the range 500 cycles to 3 Kc.

To obtain accurate data from this a means of measuring the frequency is required, once the frequency is known the use of calibration charts will give details of satellite functions. As can be seen, reasonable accuracy of audio frequency measurement is essential. Methods used can be direct reading frequency meter or digital frequency meter, however these can give inaccuracy under noisy signal conditions. Another method is to use a standard oscillator and compare it with the audio signal from the satellite. This can be done by feeding both into a c.r.o. and forming a Lissajous pattern; this system is difficult when noise on the incoming signal is fairly high. One other point is that not many shacks are equipped with digital frequency meters or a c.r.o. A simple method is to compare the two frequencies by ear but once again under noisy signal conditions accuracy of reading is hard to obtain.

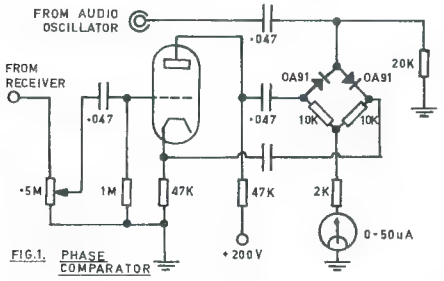


FIG.1. PHASE COMPARATOR

By using a phase comparator we overcome the noise problem and have a cheap direct reading device that can be used off receiver audio during a satellite pass. This means that those who don't have recording facilities can still extract important information and assist in the project. However, this unit can be used in conjunction with tape, after the pass, to extract data.

There is one problem, however, tape recorders have inherent wow and flutter, which will cause frequency modulation of the recorded signal. To determine the unknown frequency under these conditions the standard oscillator is tuned until the meter deflects negatively or positively, depending whether you are high or low in frequency. As you near the exact frequency the meter will oscillate between negative and positive, and when the amount of deflection is equal in the negative and positive directions the frequency is exactly in phase and a direct reading from the oscillator calibration can be taken. When measuring from tape, the frequency and severity of the deflection will depend on the condition of your tape machine.

* 48 Sanderson St., Lesmurdie, W.A., 6076.

When measuring under ideal conditions, such as direct from receiver audio, a steady negative or positive reading will appear on the meter. When the standard oscillator is exactly on frequency the meter will read zero. There will be no reading on the meter until the standard oscillator approaches the frequency of the unknown signal. A sudden deflection occurs when about 20 Kc. off frequency, it is then only necessary to adjust the standard oscillator until the phase comparator unit reads zero.

A short description of the phase comparator (Fig. 1) may help you to understand its operation. It is basicly a bridge, of which two arms are fed from the unknown signal, one 180° out of phase with the other, obtained using a phase splitter. The standard source is fed into one leg and the other side of the bridge is fed to a centre zero 50 uA. meter.

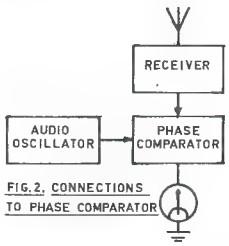


FIG.2. CONNECTIONS TO PHASE COMPARATOR

The unknown signal being 180° out of phase, will produce no output; this also applies to any noise on the incoming signal. When the standard signal is not in phase with the unknown signal, the bridge will be unbalanced, one diode will conduct depending on the phase relationship between the signals, and a negative or positive voltage will appear at the arm of the bridge being metered. As the two frequencies approach each other the meter will move towards zero. When both signals are in phase the bridge is once more balanced and a zero reading will appear on the meter.

As you can see, unless noise is occurring at approximately the same frequency as is being read, it has no effect on the meter reading. Under test conditions a 1 Kc. tone was set up on a c.r.o. and receiver noise was added until the original signal was not visible, being completely masked by noise. There was no change in accuracy of measurement, and for that matter, no indication of the presence of noise.

I will not add a circuit of the audio oscillator, as many circuits have been published. One in the December "Electronics Australia" should be suitable, but one improvement would be to bandspread the range between 500 cycles and 3 Kc. to obtain greater dial calibration accuracy. Any commercial unit should be suitable, provided its calibration accuracy can be trusted.

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HAMILTON S.S.B. GATHERING

The January 1968 holiday week-end saw yet another successful Sidebanders' Gathering at Hamilton, Victoria. This was the third of these week-ends, which are held every other year. Local organisation was by Danny VK3ADD, Ern VK3AEM, and Tim VK3TW, all of Hamilton, assisted secretarially by Dud VK2DQ, who, unfortunately was kept at home in Broken Hill by a throat infection.

Sidebanders assembled at the Western Motel on the Saturday afernoon before the dinner in the evening. Several arrivals were filmed and shown on the Ballarat Regional Television that evening. With true journalistic licence the announcer described proceedings at the Hamilton "Single-Side-Board" convention, but this was "heavily" corrected at the second showing. How would they react if we were to refer to their "vestigial sideboard transmission"?

The trip to Hamilton was hot for all travellers except for John VK2QJ and XYL Ruth, who flew down from Berri (N.S.W.).

It was much cooler next morning for the technical lecturettes at the R.S.L. Hall. The first speaker was your scribe with a brief review of current matters of interest to sidebanders, in particular the newly promulgated P.M.G. regulations governing power output of s.s.b. transmissions.

The second speaker was George VK3VX, who is the Institute's I.T.U. representative and organiser of the "Intruder Watch". He stressed the reasons why band occupancy is so important if we are to retain their use and not have them swallowed up by broadcasters and other unidentifiable intruders.

Geoff VK3AC had a few words of wisdom on further measures for mobile interference suppression. He followed this with a tape of Mr. A. Hancock as a Radio Amateur which gave us all the chance to laugh at "ourselves as others see us".

Finally Ray VK3ATN told us of his 2 metre moon-bounce experiments for which he received his Award of Merit from the A.R.R.L. He did well to tell us so much in the short time available, and concluded with tape recordings of the actual moon-bounce contacts.

Should you contact any VK sidebander who tells you that "It raining in Tokyo is not," you will know that he enjoyed his visit to Hamilton—January 1968.

Aswel Audio Phaseshift Networks

Small quantity available in reply to recent demand.

Price $8 includ. Reg. Postage

ASWEL

17 Clisdell Ave., Canterbury, N.S.W., 2193

Phone 78-5368

SPEECH-COMPRESSION FOR EXCITERS

I have built speech compressors before, the old type with push-pull variable-mu tubes with transformers and full-wave diodes, and more recently the transistor type, to save space. The former are too large, and the latter appear to add quite a bit of distortion which some hours of persistent work did not correct.

Then came the simple valve job in February 1963 "QST," so I decided to build it into the exciter here at VK5NN. I have followed the original circuit rather loosely, and made the following discoveries and changes:

The original amplifier was shown in August 1965 "Amateur Radio" on p. 17. This used a 12AX7 followed by a clipper to drive the 6C4 output stage. Two more valve sockets were fitted to the chassis, the first a 9-pin (noval) and next a 7-pin miniature for the 6BA6 controlled tube. The first change was to re-wire the 12AX7 socket to take a 6BR7 low-noise audio tube—much like an EF86 which is probably more readily available in Australia.

A 6AB4 triode was hard to find so a 6BX6 was used as a triode, but it was necessary to double the plate resistor to 47K to get sufficient voltage out of the stage to bias off the 6BA6.

In the original circuit a simple screen grid dropping resistor was used, but I found it necessary to use a voltage divider, as shown in Fig. 1, otherwise, when you try to bias the 6BA6 grid to reduce its gain, the screen grid draws less current and its voltage swings up to almost full h.t. and the gain does not reduce as required. Adding 100K from grid 2 to earth had the desired effect.

As published, the 6BA6 had a plate load resistor of only 22K ohms, and so its output was very small. Obviously the original was intended to provide an output signal at a level similar to the microphone. Increasing this to the 100K ohm shown gave sufficient drive for the 6C4.

The 6BX6 only amplifies the signal and the network with diodes, resistors and condensers which follows it, provides the control bias for the 6BA6. The a.f. signal is fed to the 6BA6 by the 0.0068 uF. capacitor. The OA85 diodes are nothing special and any germanium diodes with high back resistance will be satisfactory. Those used measured about 0.5 megohms on the ohm meter's "ohms x 1000" scale.

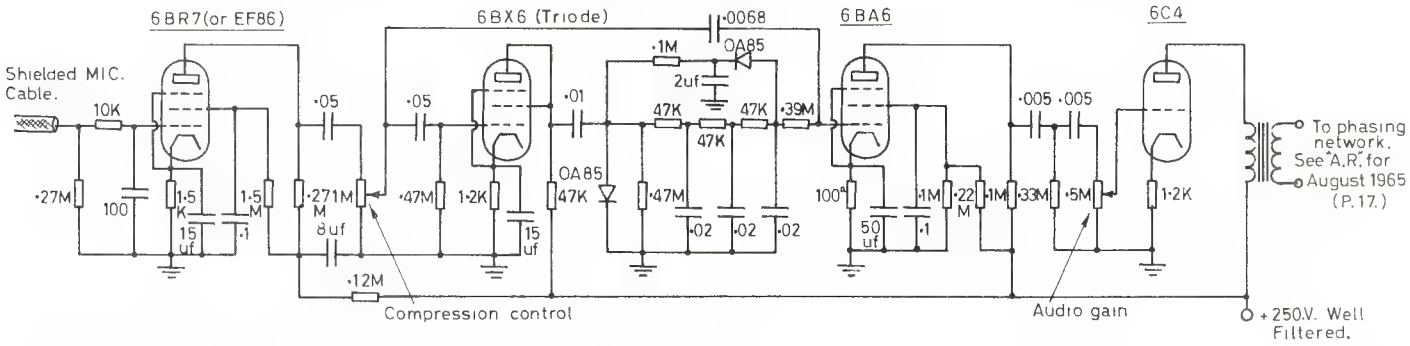

FIG.1. AUDIO AMPLIFIER FOR S.S.B. EXCITER—WITH SPEECH COMPRESSION.

This compressor appears to do the job without introducing distortion. If you expect to be able to walk around the shack and talk, letting the poor compressor take up the changes in level you will be disappointed, but tests on the air showed that it had adequate control from about 2 feet to 3 inches from the mouth, with normal speaking, although room echoes, the clock, the dogs and kookaburras, all tend to show up between words if the mike is too far away.

The beauty of this compressor is the small space it took to build it into the exciter. It will certainly be useful for shack visitors, especially when "Jamboree of the Air" comes around again.

73 for now, Phil VK5NN.

TECHNICAL ARTICLES

Readers are requested to submit articles for publication in "A.R.," in particular constructional articles, photographs of stations and gear, together with articles suitable for beginners, are required.

BARGAIN!!!

We are clearing our stocks of SWAN 500 Transceivers for

$600

Be early or you will miss the bargain of the year

A new Swan 350 and 500 is shortly due to appear with new type output tubes and the 500 will have sidetone oscillator for the CW man.

ALSO IN STOCK:

★ **Swan 250 Transceiver** for 6 metres, $445.

★ **Galaxy V** Mark 2, $550.

★ **Heavy duty Power Supply** for above sets with in-built speaker, $70.

★ **Gonsett SB2** 2 metre SSB Transceiver with 110 power supply, $400.

★ Imported **Hy-gain TH6-DX Thunderbird Antenna** with the new BN-86 balun included, $220. Without balun, $210.

★ **Hy-gain TH3-JR** with BN-86 balun, $110. Without the balun, $100.

★ **BN-86 Balun**, $17.50.

★ Ham-M **heavy duty Rotator**, $180.

★ Soon available: German **9 Mc. super Filters** with 8 crystals, $40.

★ **HA-14 Linear Kits** with power supply, $225.

★ Heathkit HW32A **single band Transceiver Kit** for 14 Mc., $170.

★ New-Tronics 4BTV 80-10 metres **Vertical**, $70, or without 80 metres top loading, $55.

Since the absence of Arie overseas, I have been doing my best to meet the needs of all. He informs me that in a short while he will be homeward bound with a stopover in Japan to glean from what is offering there the best in Ham gear and this will be put on the market on his return at our usual competitive prices.

—Alex Outtrim.

SIDEBAND ELECTRONICS ENGINEERING

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Telephone Springwood 51-1394 — After hours 51-1528

VK-ZL-OCEANIA DX CONTEST 1967 RESULTS

AUSTRALIA AND NEW ZEALAND

Phone Section

Call	80m	40m	20m	15m	10m	Total
VK1QL	—	—	990	1590	2710	5290
VK2APK	—	780	8250	4525	3675	17230
VK2KM	—	220	6955	4685	4700	16560
VK2AOU	—	—	2785	630	355	3770
VK2PN	—	—	—	—	795	795
VK3AMK	—	—	4090	3520	2425	10035
VK3AXK	—	—	2885	2930	1500	7315
VK3SM	—	—	—	4210	—	4210
VK3AKS	—	—	3745	—	—	3745
VK3YQ	—	—	815	1165	—	1970
VK3ABA	—	—	—	1175	—	1175
VK3XB	—	—	870	—	265	1135
VK4LT	—	—	5280	2135	5095	12510
VK4FA	—	—	4410	1985	770	7165
VK4SF	—	—	7130	—	—	7130
VK4DO	—	—	3580	—	—	3580
VK4XJ	—	—	—	—	1155	1155
VK5BB	—	—	3495	3435	2960	9890
VK5WP	—	—	—	—	5165	5165
VK5KN	—	—	4625	—	—	4625
VK5EK	—	—	—	—	4355	4355
VK5MF	—	—	—	—	3815	3815
VK5FM	—	—	—	2845	—	2845
VK5ZZ/T	—	—	—	2615	—	2615
VK6XX	—	110	6965	4810	7435	19320
VK6RU	—	—	8020	3655	7005	18680
VK7DK	—	320	6810	3540	2825	13495
VK7SM	—	765	3980	3850	—	8595
VK9GN	—	—	5350	4075	6030	15455
VK9DR	—	—	1235	3545	4160	8940
VK9PJ	—	—	815	2600	4145	7560
VK9XI	—	—	2185	2045	1165	5395
ZL1AIX	155	490	7295	6115	5025	19080
ZL1IL	—	—	—	2820	3175	5995
ZL1AVO	—	—	—	5475	—	5475
ZL1AAS	—	—	—	—	5340	5340
ZL1AFQ	—	—	4095	—	—	4095
ZL1TZ	—	—	1645	—	—	1645
ZL1AGO	—	1400	—	—	—	1400
ZL2AYI	—	—	5010	—	—	5010
ZL2AZI	—	—	1755	—	—	1755
ZL3QH	—	110	7825	4240	2715	14890
ZL4BO	—	—	165	1950	—	2115

C.w. Section

Call	80m	40m	20m	15m	10m	Total
VK1GD	—	—	5485	4370	2395	12250
VK2APK	—	1905	6920	6220	3425	18470
VK2BKM	—	1610	7805	5880	3015	18310
VK3AXK	235	1760	6811	5305	1015	15126
VK3DQ	—	1300	5885	1215	—	8400
VK3XB	165	455	5190	1345	—	7155
VK3APN	500	3370	—	—	—	3870
VK3QK	—	3485	—	—	—	3485
VK3OP	—	3280	—	—	—	3280
VK3RJ	—	—	—	—	2045	2045
VK3ABR	—	—	1375	485	—	1860
VK3ABA	—	—	—	1255	—	1255
VK3KS	55	—	715	—	—	770
VK4SS	—	285	3045	4885	1295	9510
VK4JM	—	—	5660	3365	400	9425
VK4PH	—	—	1175	4110	990	6275
VK4JC	—	—	5095	—	—	5095
VK4XJ	—	—	—	—	4270	4270
VK5FO	100	1510	3885	—	—	5495
VK5FM	—	—	—	5370	—	5370
VK5FH	—	—	4310	—	—	4310
VK5KO	455	935	1160	975	630	4155
VK5RX	—	—	2935	—	—	2935
VK6RU	—	610	6135	4995	7265	19005
VK6WT	—	—	5485	1510	720	7715
VK7SM	—	2125	5945	2525	—	10595
VK7RY	—	—	385	—	—	385
VK8HA	—	55	4025	2885	4825	11790
VK9GN	—	1520	4945	3775	4465	14705
VK9WD	—	55	2370	4100	1255	7780
VK9XI	—	—	3770	2030	—	5800
ZL1AJU	—	450	7710	7285	3520	18965
ZL1DV	—	1425	6390	7030	2170	17015
ZL1IL	—	—	4600	5495	3440	13535
ZL1APW	—	—	3420	3605	2385	9410
ZL1VD	—	440	3305	1405	990	6140
ZL1TZ	—	—	3200	—	1960	5720
ZL1HW	—	—	—	5155	—	5155
ZL1HV	—	—	2460	660	830	4595
ZL2CD	—	1215	4200	4185	—	9600
ZL2DM	—	—	5585	—	—	5585
ZL2AZI	—	—	410	—	—	410
ZL3QH	—	—	8190	5340	2330	15860
ZL4BO	210	1150	7025	6220	1020	15625
ZL4OP	—	—	2115	—	—	2115

Listeners' Section

Phone:

VK2—	
WIA-L2074	580
VK3—	
WIA-L6021/VK3	15215
R.P.T.	1345
VK4—	
WIA-L4144	12050
VK5—	
WIA-L5080	925
WIA-L5086	325
VK6—	
WIA-L6042	8845
WIA-L6038/P	540
VK7—	
WIA-L7031	2145
ZL—	
ZL149	13980

C.w.:

VK3—	
WIA-L3042	6515
VK6—	
WIA-L6042	11760

OVERSEAS

Phone Section

Oceania

DU1FH	16440	KH6IJ	16359
K0ILI/KG6	3150	W3DWG/VR6	188
KG6AQI	4011	VR2DK	2530

North and South America

HP1JC	6512	WA4PXP	138
KP4CK	1200	K5JEF	1740
LU1DAB	1938	WA6EPQ	14625
PY2SO	2010	K0GJD/6	12768
PY3HT	60	WB6ALK	8897
TG8IA	3100	K6SVL	814
VE6IN	60	W6ISQ	627
VE7AHG	4031	W6OJW	351
WA0CJU	5017	WB6VVZ	2
WA0EMS	4710	W7SFA	9287
K0HGW	468	W7YEX	62
W1BIH	198	W9LKI	2369
K2DJP	2376	W9KXK	441
W2IUV	245	YV1EL	2240
W4NBV	5376	YV5BPJ	2200
W4HOS	232		

Japan

JA1ADN	3146	JA5LI	2080
JA1JNM	189	JA5PU	1541
JA1BNW	168	JA6AD	6886
JA1SJV	85	JA6AFL	4456
JA1PVJ	75	JA6GWI	1881
JA1NEZ	10	JA6ATL	1241
JH1GTQ	8	JA7CDV	5940
JA1NKX	3	JA7FC	4401
JA2FTJ	980	JA7DXX	756
JA2IA	720	JA8SW	1726
JA2HFB	95	JA8AAM	490
JA3GRO	72	JA8BBM	320
JA4FM	804	JA8GR	12
JA4QR/5	450		

Asia

UA9OH	1287	ZC4CN	2200
UG6AW	10	EP2BQ	2820

Europe

CT1MW	266	OH2GU	108
DJ2MV	500	OH7PI	5096
DJ2YL	7140	ON4DH	960
DJ2JO	88	ON5KY	676
DJ4AX	3255	OZ3KE	372
DJ6TK	138	OZ4FF	986
DL1AM	18	OZ8RH	940
DM2ATD	1400	PA0NTR	24
DM2CZL	2970	PA0VB	9
F3II	270	SL1CP	90
F3KW	2964	SM2AGD	912
G3IAR	897	SM3BUS	48
G3KSH	162	SM4CGM	280
HA0LC	12	SM4ARQ	18
HA1SB	10	SM5API	3861
HA5FE	8	SM6AEK	3510
HB9AKJ	16	SM7CRW	2441
HB9DX	112	SM8WB	456
W0GTA/LA	5760	SM0BUD	540
OH1UR	40	SP5BT	80
OH2BAD	52	YO3ZM	42
OH2BR	189	OX3BX	1170

U.S.S.R.

UA1KBW	2580	UA4KED	336
UA2KBD	224	UB5KMX	5150
UA3AVV	296	UB5WJ	732
UA3AYN	175	U5ARTEX	432
UA3DR	648	UC2AA	5088
UA3KBO	4056	UC2BF	182

C.w. Section

Oceania

FO8BJ	17	VR2DK	1770
KH6IJ	7200		

North America

VE3AU	1190	W5BUK	1890
VO1FB	60	WA6EPQ	14520
W1EVT	9728	W6LCX	8674
W1BIH	3328	WB6PGK	4928
W2LWI	4872	W6YY/W6JU	3120
K2COR	368	W6ISQ	459
W2NRV	113	W7PGX	14608
W6EWN/3	6014	W7SFA	11310
W3MFW	1552	W8DWP	160
W3DPJ	1185	K8MMZ	45
W3VKD	612	W8KYD	16
W3QOR	224	W8KXK	574
W3UHN	36	W9IHN	490
W3CBF	6	W9LKI	204
W4NBV	3796	W9QWM	272
W4HOS	819	WA0CJU	1170
W5WZQ	7956		

South America

HC1TH	1008	PY2OU	132
PY2BJH	1232		

Japan

JA1MIN	4611	JA3FYC	741
JA1ADN	4536	JA3GRO	270
JA1THL	2805	JA3HCJ	260
JA1JKG	2064	JA4BJO	2116
JA1SJV	644	JA5BFN	650
JA1WWY	288	JA4AQR/5	189
JA1BSB/1	60	JA6GPR	270
JA1PIG	30	JA7CDU	5270
JA2LA	1530	JA7ARW	1024
JA2ITH	564	JA8CEU	358
JA2HFB	560	JA9BGW	840
JA2AUV	385	JA9BFM	240
JA3YKM	2772		

Europe

DL7AA	6975	OH2BDV	484
DM2AND	3240	OH5RZ	374
DL8KJ	2100	OH2BAH	300
DM2CZL	1980	OH2OW	288
DM3SBM	1453	OH7NW	144
DJ3WU	1892	OH2BAD	114
DM2AUO	1615	OH5WH	108
DM2BJD	432	OH2YL	96
DL1AM	390	OH2BR	90
DJ6TK	272	OH1UR	18
DM3YPD	232	OK2RO	638
DJ5GG	112	ON4XG	1554
DM4UJJ	56	OZ1LO	3024
DM2BDH	50	OZ4FF	1380
DM2DBM	50	OZ4CF	72
DM2BZN	30	OZ5DP	2
DM3RM	2	PA0VO	1360
F3KW	520	PA0VB	468
F2PO	168	SM5API	2001
G3RJH	6960	SM5BNX	1909
G3SSO	3472	SM0BUO	1554
G4CP	3190	SM7QY	387
G5RI	3025	SM7ANB	386
G5RP	2241	SM3BUS	225
G2DC	1728	SM4ARQ	184
G3DYY	1638	SW3WB	18
G3KSH	240	SM2BYD	8
GM3JZK	306	SM0CER	2
HE5FE	96	SP3AIJ	585
HE9GMP	602	SP5AXW	338
HB9DX	286	SP8AG	168
HB9AKJ	56	SP2AOB	18
W0GTA/LA	598	SP5AFL	8
OH5UX	3042	YO9APJ	48
OH1TN	2775	YO4KCE	16
OH2BAC	1725	YU1BCD	2200
OH3YB	1407	YU1EXY	1764
OH3MK	750		

Asia

EP2BQ	2548	UA1KAE	220

Antarctica

U.S.S.R.

UA1KBB	748	UW9OU	790
UA1ZW	495	UA9WL	540
UA1ZX	492	UA9UC	210
UA1ZL	286	UA9FN	50
UA1NZ	252	UV9CU	44
UA1KAI	60	UA0ML	972
UA1PU	32	UB5KFF	960
UA1DX	30	UB5KKA	542
UA2DM	224	UB5KLD	504
UA3UJ	1827	UT5KKA	192
UA3NP	408	UB5LS	55
UV3AAM	243	UB5OD	15
UA3KHR	168	UB5TH	12
UA3KBA	108	UT5LN	10
UA3KHA	54	UC2AW	12
UV3TP	22	UC2KGF	2
UW3HV	32	UD6BW	200
UA4QM	289	UJ8AH	49
UA4KKC	520	UL7BG	1900
UA6KAE	750	UL7GW	114
UW6BS	507	UL7GI	21
UA6KAA	400	UL7KAA	10
UW6BK	176	UP2ADZ	56
UW6LC	63	UP2KBA	3
UW6AO	33	UR2FU	2
UA9OH	1045		

(Continued on Page 16)

Moon-Bounce Schedule

The following information was received from the Foreign Section Editor, V.E.R.O.N. V.h.f. Bulletin, Schiedam, Holland (Box 13).

SPECIAL BULLETIN

From: Crawford Hill V.h.f. Club, W2NFA, Holmdel, New Jersey, U.S.A.

Issued: January 10, 1968.

Subject: EME TEST—An EME Test is scheduled for April 12-14, 1968, on 1296 Mc. All stations having adequate 1296 Mc. equipment are invited to participate. Schedule request will be honored in advance by mail. Please state equipment capability.

An alternate test period is also provided in the event that local weather or technical difficulties prevent operation on the above dates. The alternate test periods will be April 19-20, 1968.

Station equipment at W2NFA: Transmitter power, 200 watts minimum output; transmitter frequency, 1296,000 plus or minus 5 Kc. Mode of transmission, c.w. or f.s.k. Antenna, 60 ft. parabolic reflector, estimated gain 44 db. above isotropic. Polarisation, right circular transmit, left circular receive (I.R.E. definition). Receiver n.f., 3 db.

Moon visibility at W2NFA (40.1 degrees N, 74.2 degrees W):

Moon Rise 2300 GMT, April 12, to Moon Set 1028 GMTH, April 13. (Friday night orbit—we may start late).

Moon Rise 0018 GMT, April 13, to Moon Set 1057 GMT, April 14.

Moon Rise 0620 GMT, April 19, to Moon Set 1520 GMT, April 19.

Moon Rise 0705 GMT, April 20, to Moon Set 1632 GMT, April 20.

Procedure: Echo testing will commence at moon rise and continue for one half hour prior to any schedule. Estimated echo S/N in a 1 kc. bandwidth is plus 11 db.

All reports of reception will be greatly appreciated.

Official liaison station: WB2NDH will assist as official liaison station on either 14,235 kc., 21,385 kc. or 28,690 kc.

ATTENTION VH.F'ERS

During the early months of 1968, Iceland will be represented on 144 Mc. From approximately 25th Jan. to 15th April a station will be in operation at Keflavik on the 7, 14, 21, 28 and 144 Mc. bands, using maximum legal power (150 watts input). Sufficient system gain should be available to almost guarantee contact with the U.K. on 144 Mc. Skeds with other countries will be desired.

Publications Committee Reports

February Meeting.—The committee received correspondence from VKs 2ALK, 3AHS, 3ASC, 3AMK, 3ZGC, 3ZKC, 4ZAL. Technical articles arrived from VKs 2AOU, 2JR, 3UG (3) and 4BM. These contributors will, as usual receive acknowledgments through the mail.

It was decided that we would in future hold our meetings on the first Monday in the month unless the second Monday falls no later than the eighth of the month. By this means, we can avoid late meetings and the exclusion of monthly reports through meeting nights falling due after "A.R." has been passed to the printer.

The financial position of "A.R." was considered, and as a result we resolved to publish fewer pages for the next few months and to approach Federal Convention for a price increase. The future of "A.R." depends on their decision.

After reviewing all the technical articles published in the previous year, it was decided that the Awards for Technical Articles should be made to Messrs. K. A. Kimberley and F. T. Hine. Many names were considered for the Higginbotham Award. It was agreed that this award should go to Ian Berwick, VK3ALZ, as recognition for his consistent submission of articles on original work and research he has done.

March meeting.—Technical articles were received from VKs 2ZPM and 6ZCB, whilst correspondence was received from VKs 2AFD, 4ZAL, 4ZIM and Owen Mace of Project Australis.

Discussion centred round the unsatisfactory position with the mailing service, and the possibility of making a change will be again investigated. A number of letters have been received on the subject of the new regulations and particularly the code speed requirements. These are, at the time of writing, with Federal Executive for vetting, and will all be published in the May issue.

SUBSCRIPTIONS DUE

All members of the W.I.A. are reminded that annual subscriptions are now due and should be paid promptly to their Divisional Secretary. Non financial members will not receive a copy of "A.R.," and back copies may not be available upon request. To preserve continuity of your files of "A.R.," please pay your annual subscription now.

A HANDY D.C. SUPPLY

(Continued from Page 7)

stability of the 20v. rail. I found a fair solution by using a 6.2 + a 7.5v. zener diode together with a germanium transistor, the 2N388, as amplifier.

All three supplies rely on a charge of the reservoir condenser to near peak transformer voltage for proper performance. Therefore, the transformer diode combination must have the required peak current capabilities.

Switch 3 is left in the **low** position for light loads and is put into the **high** position if the output voltage drops under load. There is a possibility that the output may drop under high load in the 6v. position of S1. If that occurs, the lead from S1a pos. 1 can be connected to the 12v. tap and the switch No. 3 put to low, thus applying 9.45v. to the rectifier.

The top supply, or pre-regulator, keeps a more or less constant current in the 3.9K collector resistor of the amplifier. This current is then distributed between the base and collectors connected to the right hand side of 3.9K according to input voltage level and load and Mr. Kirchhoff.

The first emitter follower, the BCY11, also benefits from a constant collector supply.

Now then, with a fairly well stocked parts shelf, some patience and the above words, plus circuit, you can, if you wish, go to it. Shouldn't take you three months.

— . . . —

VK-ZL-OCEANIA DX CONTEST

(Continued from Page 15)

Listeners' Section

A3942	2074	REF18783	1296
A5224	3082	SP2-7143	380
BRS-26431	6264	SP1-7055	80
GW7796	114	UA1-74512	810
DL12090	3094	UA3-37602	460
DL10101	44	UA3-12982	676
DM2542/L	126	UA4-14144	56
DM2589-M	320	UB5-068-3	56
DM2468-N	928	UA9-2847/UA3	1260
DM0772/J	18	UA9-9721	448
DM2164/F	18	UB5-5970/UA4	1274
DM3696/F	182	UB8-8451/UL7	968
DM4029/L	616	UQ2-037-10	1864
DM2109/M	1388	UQ2-22421	1022
HA5-153	60	UB5-45067	4600
HA6-020	280	VE3-11606	24
IT1-12567	720	VU-SWL0020	620
JA7-1819	882	WPE2PZD	1120
JA0-1320	1562	WPE2MLU	1708
ONL-2013	1204	WPE7BLN	2226
ONL-383	10912	WPE8AA	560
NL819	585	W8-8260	43
REF17535	360	YU2RS-233	410

Check Logs

EI5F	OZ7KV	ZS6D
JA1MIN	PZ1CQ	SM7MO
JA7FC	PZ2AH	SM5BXP
LZ1YW	SP2BMM	PA0JPC
OE3WWB	UA3KBA	G3WP
OH3NY	UB5FG	DM4HD
OH5VY	VK3HL	DM3WSO
OH5SM	W1WY	DM3BE
OZ3GW	W1TX	DM2BTO
OZ3PO	W4AZR	DM2BLJ
	YO4KCA	

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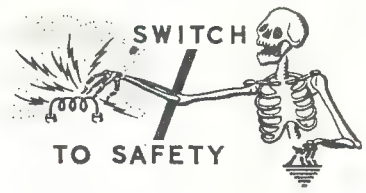

DX

Sub-Editor: ALAN SHAWSMITH, VK4SS
35 Whynot St., West End, Brisbane, Qld., 4101

Conditions seem to be holding up on all bands. Ten is a little quiet and the signals seem to lack strength. 80 also is not showing much life. Just the odd European around 1830z. Fifteen is still open day and night to here and there and is not far behind 20 as the best band. Some Africans have been workable on 7 Mc. around 1900z, but Europeans at this time are notably absent. This equinox period may help liven up things a little as it has been prone to do in the past.

NOTES AND NEWS

Tadzhik: UJ8AZ 14024 0425.

Pitcairn Is.: VR6TC has a sked with W5OLG each Monday at 2100 on 21350. Call W5OLG if you want a QSO or write to Box 261, Grapevine, Texas. This arrangement has been in operation for some years and works out okay.

Ivory Coast: TU2BX on 14025 kc. about 1145z.

Rio de Oro: EA9EJ, Justo continues QRV 14113 s.s.b. 1758, 14195 s.s.b. 1915.

Kerguelen Is.: FB8XX 14040 c.w. 1630, 14090 c.w. 1810. QSL via FR7ZD.

Galapagos Is.: HC8RS, 14150 s.s.b. 2330.

Gulf of Fonsseca Gp.: HR4SN 14151 s.s.b. 0300. Salvador Navarrete P.O. Box 2.

Volcano Is.: KG6IC, 14250 s.s.b. 0749, 0950. Don also operates 21405 and 28560 s.s.b.

Marcus Is.: KG6IF 14250 s.s.b. 0756.

Bonin Is.: 14250 s.s.b. 0832, also 21410 s.s.b. 0151.

Sao Luis: PY8NB 14130 s.s.b. 1900.

Rio Muni: EA0TU 3596 c.w. 0530, 3600 s.s.b. 0535, 21005 c.w. 0655. 28558 s.s.b. 1445. Albi's QSL manager is HB9AHA.

San Andres: HK0BKW, Fred, 14228 s.s.b. 1945, 14179 s.s.b. 2222.

Palmer Archipelago: KC4USP, 14226 s.s.b. 0750, 21235 s.s.b. 1950, and often around 14330 s.s.b. QSL via 5130 Hillcrest Dr., Clarence, New York 14031.

Midway: KM6DE, Box 43, F.P.O., San Francisco, Calif., 96614. KM6BI heard 21340 s.s.b. 0300. QSL same as for KM6DE.

Crete: SV0WL 14200 s.s.b. 0840, 21258 s.s.b. 1723, 28550 s.s.b. 1626. QSL via W2CTN.

Rhodes: SV0WE, Mac, 21303 s.s.b. 1123. SV-0WU 28700 s.s.b. 1005. P.O. Box 66, Rhodes.

Mauritius: VQ8AI is ill with heart condition and would appreciate letters. Drop him a line, he has given many Hams their first QSO. Raoul Thomas, Thompson Rd., Vaccas, Mauritius.

Ocean Is.: VR1L 14238 s.s.b. 0813, 14253 s.s.b. 0830, 14277 s.s.b. 0815, and reported U.S.A. 21300/400 s.s.b. week-ends 0100/0430.

Greenland: XP1AA, Frank, 14225 s.s.b. 1615. QSL to CMR 1279, A.P.O. New York, N.Y. 09023.

Algeria: 7X0AH, Harry is on two or three times each week—on the YL Int. S.s.b. System 14332 Kc. at 2000z, stays on an hour or so. QSL to P.O. Box 2, Algiers, Algeria. (Wants two I.R.Cs and light-weight envelope for reply.)

Cape Verde Is.: CR4BL, Melo, 14253 Kc. at 0203z. P.O. Box 64, Praia, Cape Verde Is. Also CR4BC, Julio, 14222 Kc. at 2300z. CR4BB 28070 1700 and later.

Central African Rep.: TL8DL 14196 kc. at 1925z.

Cyprus: ZC4RB, Rolly, 14210 Kc. at 1400z.

Faeroes Is.: OY5NS 14202 Kc. at 2000z.

Falkland Is.: VP8JR 14005 Kc. at 2220z.

Fernando Poo: EA0FP 21004 1141z and also 1719z.

Franz Josef Land: UA1KED, 14053 c.w., with the routine QSL address, Box 88, Moscow.

French Polynesia: FO8AA, Tahiti, 14014 Kc. c.w. at 0745z.

Fanning Is.: VR3I is expected to be the call for KP6AP/K6CAA while on Fanning Is. Those who have assisted Ed have their schedules for individual QSOs. Others should not have any difficulty in working him because he expects to be there for a couple of weeks.

Gabon: TR8AC on daily 14194 Kc. listening 14205 Kc. about 2130z.

Gibraltar: Jake ZB2BC 14194 Kc. at 1420z.

Republic of Guinea: W1EVT has cards for several 7G1A contacts of Sept. 1965 made by "W" stations. Send s.a.s.e. to W1EVT.

Iceland: TF2WKP daily 2000/2200z, 14195 Kc. listening 14210 to 14220 Kc. QSL: E. Daigre, Box 22, U.S. Naval Command Stn., F.P.O. N.Y., 09571. Worked here 14040, 1930z.

Iraq: YI2AC heard 14202 Kc. c.w. 2145z.

Jan Mayen: JX6RL at 2125z, 14218 Kc. QSL via Norwegian Embassy, Reykjavik, Iceland.

Chagos: VQ8CDC QRV from Garcia Deigo Is. 14 s.s.b. 1600. No other information.

Cuba: CO8RA 14198 1340. He listens in the U.S. phone section. 14200 plus.

Ghana: 9G1FV 14238 2300.

Guyana: 8R1S is a YL named Maggie. 14238 0200. QSL WA4UOE.

Lesotho: 7P8AR is ex-ZS8L. QSL W4BRE.

Kirghiz: UM8FZ 14170 0200.

Leeward Is.: VP2IS in St. Lucia, 14220 1900.

Malagasy Rep.: 5R8AX 28610 1700. QSL to TG9EP.

Mozambique: CR7IZ 14018 0300. Also worked here 7006 1930.

Ruanda: 9X5AA 21310 2000. QSL P.O. Box 28, Kigali.

Somali: 6O1GB 14214 1400.

S. Georgia Is.: VP8IR 14205 2300.

Svalbard: JW5YG 14210 2220. QSL via Norwegian Bureau.

Nauru: VK9RJ will be active for two years, so everyone should get a QSO. 14 s.s.b./c.w.

Brunei: 9M2BD, 9M2NF, 9M2XX and HS3DR plans to make the trip and operate during April. The call will be VS5RS and all bands will be used, including 160.

South Yemen Rep.: New prefix for here is said to be 7O (Seven Oscar).

Mongolia: JT1KAA is active s.s.b. 14210 Kc. around 0900z. c.w. on various bands.

Wrangel Is.: It is reported that there is no legal station active from here. UW3FD is unknown in the Moscow area.

Cayman Is.: ZF1YX is active s.s.b. 14170 Kc. around 2300z. Will answer c.w. calls.

Bouvet Is.: N.R.R.L. Traffic Dept. states that the call 3Y0EB has not been issued.

South Orkneys: VP8JH Bud replaces VP8JD as from 26th Jan., '68. Bud is active around 1900-2300z, c.w. 21054, 14016, s.s.b. 14127, 14186.

ACTIVITIES

Dave VK3QV reports much line noise on ten due to the hot, dry spell, but did manage these when the band was useable. 28 s.s.b.: DJ7BD, DM2CDL, VE6AJO, VE7IQ, VR1L, 9J2DT, also lots of Js and all the W areas. Dave reports that 9J2NW, Tony Willis, will be QRT very soon from N'dola.

Merv VK4DV reports from the "Wet" that conditions are not too bad. These were logged on 20 s.s.b.: FG7XX, 9N1MM, SP6AH, VK0GP, PJ3CC, VK0JW, HC1SJ, YV4UE, PZ-1BW, PJ2CE, ZP3AL, VQ9DH, VE3GIY, KC-4USA, VE3BSJ, 4S7PB, UT5LE, SP9ANH, VR3DY. On 15 mx: CE0AE, MP4MBB, DJ6NE, DL5AO, SM0TG, ZE1AV, ZE7JR, ZS1CD. QSLs received: MP4MBB, VQ9JW (Aldabra), 4S7BR, VS9ARS, PZ1BW.

Dud VK4MY lists the following, mainly on 20 mx. S.s.b.: MP4MBB, KG6IF (Marcus), JT1KAA, MP4BBA, UF6CR, CE6EZ, VP7NH, UG6AW, HL9TV, 8P6AF, UW9AF, KG4AN, UA2AO, ZS2RM, DU9FC, IS1RUA, VP8IU, FG7XL, CP8AO, CR4BC, KG6IC (Iwo Jima), KG6IG (Bonon), YS1XEE. 20 mx c.w.: YJ8BW, UM8AP, LZ2KPD. Dud reports that Hege VU2DIA will be leaving the Andamman Is. in April for Goa. This latter is now no longer a NEW country.

Barry VK5BS has picked up a few nice ones on 14 c.w. They are YV5CKJ, JT2AB, FG7XX, VQ9B, OA4UO, 6Y5GS, UQ2KBC, AP5HQ, XW-8BP, TG0AA, EP2BQ. Barry has received the QSL of HI8XAL for an 80 mx QSO.

"KK," VK6IZ, who is ex W3ZVK, DL4IZ, VK2BKK and currently WA9RYN, breaks the ice in this column with a nice list of DX worked on 20 s.s.b., such as UW3UJ, UI8LC, EA2DV, HS4AK, ZS5JY, EL2AB, YA1DAN, HS3TM, TI2PAS, VP7NA, CR4BL, CP5CC, VP7NS, FR7ZD, CN8BB, EL2AK, FO8BK, YN1GLB, KC4USA, 3V8BZ, 9L1GQ, CR3DY, EL2AK, TG9EP, VR4CR, CE8AA, VP7NV, 9V1NR, AP2MR, OH2JT, DJ8NB, EL2AB, VP9CP, TI2IA, HS3DR, KC6CK, EL2AK, OA-4XN, ZS5OE, ZS6CC, 9J2BK, KP4AST, HK2YO, PY1CNA, SP5CIK, TI2CEG, XE0EUQ. These on 15 mx: WH6GKD, OE1JHC, KL7AGU. On 3.5 Mc.: W2GO, W2FZJ at 1130z. 7 Mc.: W2GO, W8EWS, VE3HC/W4, WA2UJS, W0WO, etc. 160 mx operation is planned. Rig at present is 3-el. Telrex up 60 feet for 20. (Some more news please OM.)

Fred VK4RF is back on the air after 18 years' absence and has made DXCC in five weeks neat, on 20 s.s.b. QRP. The scene sure has changed, says Fred. (Welcome back to DX OT'er. Let's have some personal activity notes please.—Al.)

Peter VK4PJ, still climbing the Totem Pole, reports conditions as "pretty good". The following are to his credit: 20 s.s.b. PZ1AG, TI2AO, CT1MW, PZ1BW, 9K2BV, 6Y5CB, 9Y4AR, VP2GAI, F9VW, ZB2BM, F8UM, VS-9MB, F8YY, 4X4RW, PA1AP, PZ1BI, PJ2CZ, CO8MH, 9Q5EP, 7X0AH, UV3TP, HI8XDA, PJ3CR, YU1KG. On ten, DM2ATD, DL1SO, VS6CO, DJ0KO, DL2AW, UB5AJG, G3BHW, CT1BH, HB9QQ, UB5WF, SV1AE, UA3KBO, plus others. Most of the above QSOs were made between 0800-110 and around 2000.

SOME QTHs

VR1L—K6UJW.
VS9ARS—G3VIT.
VQ9JW—G3ONU.
FY7YM—VE1KG.
8P6AH—VE3DLC.
PZ1BW—VE3EUU.
VK0JW—VK3UQ.
CE0AE—WA5PUQ.
VK0GP—Via VK3 Bureau.
VQ9DH—P.O. Box 191, Mahe.
KC4USA—C/o. U.S.C.G.C., "Westeind," F.P.O. New York, N.Y. 09501.
CR4BC -P.O. Box 36, St. Vincent, Cape Verde.
JT1KAA—P.O. Box 639, Ulan Blator.
6Y5GS—1 Balmoral Ave., Kingston 10.
TR8AG—P.O. Box 157, Libreville, Gabon.
8R1C—P.O. Box 739, Georgetown, Guyana.
BV2A—P.O. Box 101, Taipei.
GD3AIM—5 Elizabeth Rise, Isle of Man.
TU2BA—P.O. Box 172, Abidjan.
VQ8CC—P.O. Box 14, Curepipe.
ZD5X—P.O. Box 45, M'babane, Swaziland.
FL8RA—Pavillion 23, La Vaise, 21 Genlis, France.
FL8HM—P.O. Box 215, Djbouti.
YS1XEE—WB4BOJ.
5U7AK—Rev. D. Keppel, Pros. Mission, Tera, Niger.
VR3DY—KH6GLU.
KG6IG—WA6OET.
VP8IU—VE7AON.
8P6AF—VE4SD.
CE6EZ—K0SQX.
KG6IF—W6ANB.
3V8BZ—DL7FT.
VP1PV—G3UML.

The QSL manager list is a growing and formidable one. It reads like a Town Crier's "Hear Ye Oh Yez". It seems that there are almost as many managers as rare operators. Lists being received here show contradictions. Often it is not possible to determine the **right** QTH. Managers come and go like stars in the galaxy. The operator-QSL manager relationship is being badly overplayed and it is not the **rare** station that is primarily at fault. Such an operator is besieged by offers from U.S.A. and Europe to take over the QSL situation at absolutely no cost to the "rarie". The hoi-polloi callwise (that's us) pays for this service. I leave you to ponder on the ethics of such. True, the **right** QSL manager does a good job but not all those involved are doing honorable service. Too many are on the "petty status" band wagon.

STOP PRESS

The Miller Saga.—K0TCF has relinquished the QSL job for W9WNV. New man is W0QQC. K0TCF has given him all the cards received for operations from Cocos-Keiling, Blenheim, Nelson and Geyser Reef. It is not necessary to send new cards for these.

W.I.A. D.X.C.C.

Listed below are the highest twelve members in each section. Position in the list is determined by the first number shown. The first number represents the participant's total countries less any credits given for deleted countries. The second number shown represents the total D.X.C.C. credits given, including deleted countries. Where totals are the same, listings will be alphabetical by call sign.

Credits for new members and those whose totals have been amended are also shown.

PHONE

VK5MS	317/338	VK4HR	293/309
VK3AHO	315/327	VK4FJ	279/296
VK6RU	305/328	VK3TL	262/266
VK6MK	304/321	VK2APK	257/264
VK5AB	300/314	VK4TY	257/258
VK2JZ	295/310	VK2AAK	246/250

New Members:

Certificate No. 80—VK3AKS 109
,, ,, 81—VK4PJ 104
,, ,, 82—VK3AMK 124
,, ,, 83—VK2AGO 142

C.W.

VK2QL	295/315	VK4HR	268/290
VK2ADE	291/313	VK3NC	267/286
VK3CX	291/312	VK3ARX	263/271
VK4FJ	291/313	VK6RU	262/283
VK3AHQ	290/302	VK3XB	259/272
VK2AGH	282/295	VK2APK	257/264

New Member:

Certificate No. 89—VK4TY 248/259

OPEN

VK2AGH	311/329	VK4TY	296/308
VK6RU	308/331	VK2EO	295/316
VK2VN	306/320	VK4FJ	295/318
VK2ADE	305/329	VK3TL	281/285
VK4HR	305/327	VK3ARX	281/289
VK6MK	305/322	VK2ACX	276/300

New Member:

Certificate No. 106 VK4DV 102

SWL

Sub-Editor: D. GRANTLEY, WIA-L2022
P.O. Box 222, Penrith, N.S.W., 2750

PERSONAL NOTES

Welcome to the page for Steve L5088, of Croydon, S.A. Steve has just started to move along in the s.w.l. field, under the care of Alan Raftery. Steve has a methodical approach to the QSLing side of the game and to date has heard 120 countries with recent loggings including VP6AU, VK0JW, UA1KBW, 9X5CE, ZS9L, XW8BS and KP4DCP.

Welcome home to Ernie Luff, who, following another spell in hospital, left these fair shores for a pleasure cruise which took him to VR2. Despite this inactivity he is doing well in the QSL field and with 238/171, he looks like moving into my position on the ladder ere long. His most recent QSLs are VS9HRV, YO9CN, VP2SAB, UH8BO, UP2KNP, UA2AO, FB8YY, JT1KAA, VK4HG, VP1LB, VP1SB, FH8KJ, VR1L, W5GUZ and GC3FKW. He has just received the Saskatoon Wheat Belt Award, which is not normally available to s.w.l's, but an Honorary Certificate has been issued in Ernie's case.

Talking of awards, I have received a letter from one of our best known, and least heard of listeners, namely Chas Thorpe, of Rockhampton, 4700. Chas. has been with us for many years and has a fine record. He corrects an error which I made when I mentioned that Ernie was the 1st VK S.w.l. to receive the Calgary Award. In fact, Chas. was the first, his certificate being No. 251, issued on Jan. 3, 1967. As well as this award, he has over 50 others, including the Klondike award (1st VK S.w.l.), 30 Canadian Cities (1st Oceania S.w.l.), worked all ZL, worked all Pacific (1st VK S.w.l.) and was the first person to receive the worked all VK9 award. No chaps, please don't ask me how to get these awards, but maybe Chas. will drop me a line with the details and we can publish them.

Mac Hilliard over in Campsie has been having a ball with 10 metres, with openings from early afternoon until well into the night. This has compensated somewhat for the indifferent conditions on 6 metres. It is interesting to note that from all over the world I am getting reports of these fantastic conditions from 10 metres. Ray Mosely, Bernard Hughes and John Simons from G land all proclaim the fine conditions, whilst Art Borredaile in Spain mentions it.

Another sidelight to this is a tape of dubbings which Ray Mosely from Nottingham in England made from Citizen Band transmissions emanating from the 11 metre band in the States. These guys using 5 watts are skipping their way regularly across the Atlantic.

We have our moments, and the best of these was during the latter part of January when I logged F9VN/FC, SV0WB (Greece), MIB (Geom Maria Graziana, Piazza Dello Stradone, San Marino) and to make the session more interesting, FG7XT, CE0AE, TI2CEF (Box 4492, San Jose) and many of the more regular ones made an appearance.

Just a stop press from Ernie Luff in reference to the Klondike award. There may have been some confusion over these awards between Chas Thorpe and Ernie, however to give the exact data on the Klondike award, Ernie was issued with No. 14 and Charles No. 37. It is good to see competition amongst listeners in our country, for let's face it, the S.w.l. is not a fighting force in Amateur Radio, in fact in very many quarters he is a despised relation.

DX NEWS

New call signs 7OA-7OZ (the O being a letter not a figure) has been issued by South Yemen. 9X5AV, Box 104, Kigali. 9X5BW, Box 608, Kigali, heard 2034z on 20 s.s.b. ZF1DX, QSL via K6KDS, but if you heard the one signing himself (I believe) Doc, then you have acquired yourself a pirate. VS5RCS will be on from Brunei for a week late March or early April. I understand the operators to be 9M2BD. NF and HS3RD, and they will try to use top band if required.

Zone 23 is not easily recognised, but here are a couple to help you. UA0YC, YT, YO YR and KYA. The first two on 14015 c.w., remainder on s.s.b. TT8AN on c.w., QSL via W0LYR. The TI9 Cocos Is. treasure party are at the time of writing, /MM. PA0MDG from the W. Fresians on 1245z s.s.b., TA1IB on 28053 c.w. at 0935z, and has been heard on 15 metres using c.w. and a.m. His QTH, Box 699, Istanbul. The new address of the KP4 bureau is Box 1061, San Juan, 00902. The foregoing has been received from Bernard Hughes, of the I.S.W.L. for the benefit of our chaps.

The following Amateurs can be QSLed via the I.S.W.L. bureau: W2FLK, ZL1APZ, G2KO, WA9UET, WB4BMV, VE2DCX, WA6TQK, W7HDL, K6MHD, HB9UB, WB2THL, ZD5X and G3VYY. HG8QF heard on 28 is a special Hungarian prefix. If you hear HS3SJ on c.w., don't waste time, as he is a pirate. Another rare prefix for the prefix hunters is PE2EVO from the Netherlands. 4L7A heard last October was in fact from Georgia and was the UP-2KNP club.

ST2SA is on 14021 c.w. 3C8RX was operating from Zone 1. Did you hear GB5QM/MM up to Dec. 9? He was on board the Queen Mary on her final trip. CE0PK via WB6GOV, ZS9F via K7GHZ. The QSLs for the aforementioned final voyage for the Queen Mary go to A.R.A.L.B., Box 7493, Long Beach, Calif., 90807, U.S.A. A note in Monitor says that Garry VE3GCO is still handling Don Miller's s.w.l. cards. The calls concerned are the VQ8 series and VK2ADY/VK9. Amateurs are cared for by K0TCF. (Is VK2ADY legitimate? It is not in the Call Book nor published amendment lists.)

TOP BAND

Whilst it is very unlikely that any top band loggings of note will be made here, there has in the past month been quite a lot of world wide activity on this band. With winter conditions still holding in the northern hemisphere, it is possible that you could hear something, so watch out for DL9KRA, GD3MQR, GM3SVK, GI3VYY, VQ9JW, ZB2AP, ZC4RB and 9V1LK on or near 1802 and 1967 near 2400z on Fridays and Saturdays. As this is in daylight hours here, loggings at this time are improbable, however I understand that there has been JA activity between 1807 and 1812 kc. and as VK and JA share the same period of darkness, maybe you can catch something from there. The foregoing news items have been acquired from the I.S.W.L.

COMMENT

Over the years, there has been a simmering of discontentment amongst s.w.l. ranks as to what is being done for them by the W.I.A.

There are many rumblings from s.w.l's about lack of value per dollar paid to the W.I.A., but are these shouts entirely justified? I am not at all happy with the s.w.l. position here in VK and I am far from alone in this. But let us analyse the situation. What is the responsibility of the W.I.A. towards the s.w.l.? Each State has its Council, who have authorised formation of various sub-groups such as V.h.f., Disposals, Bulletin, S.w.l., and so on. But these groups are more or less self contained, and control their own affairs. If an individual group fails to provide for their members, it cannot be blamed upon the VK2 (for example) Division as a body. It must be placed firmly at the door of the sub-group in question. Thus the point is, any lack of activities and poor attendances resulting from this are the fault of that group and the office-bearers, nobody else.

The W.I.A. have granted permission for the formation of S.w.l. Groups, they have made provision for every member to be issued with a universally accepted listener's number. What else can they do? The VK2 Group has been in existence for around ten years now, others may have had a longer existence, but in every case they have had the responsibility of electing their own officers and it is these officers, not the W.I.A., who are responsible for the success or failure of the group.

The suburban members can, if they desire, or if there is sufficient incentive, attend the s.w.l. meeting and again this support is of vital importance to the well being of the group. In the 1966 Call Book, 89 S.w.l's were listed in the Sydney metropolitan area, with a large number in the outer western suburbs. Travel to Sydney from these areas is difficult and if the meetings don't offer some value, then members won't attend. (I have attended one meeting in 10 years, this when I was on holidays from Albury.)

Of the 59 country members listed, Bob L2283 at Kingswood seems to be the closest, and if he were to attend a meeting he would get home at 1 a.m. My listed QTH is postal, and in fact I live at Hazelbrook, some 23 miles further out than shown in the Call Book. So we must assume that country members have to rely on either country radio clubs, which often have little in common with a DX minded s.w.l., or keep to themselves and make their results known through "A.R.," and use the facilities of the W.I.A. for their activities.

What can the W.I.A. offer an S.w.l.? For one who is solely interested in capturing DX, and sending QSL cards, he has a well conducted bureau and although I am still not very happy with the way we get our inward cards, the whole bureau system still represents a saving for the chap who sends out a large number of cards. For the S.w.l. who likes to do his own constructing, etc., or maybe use the other facilities the Institute presents good value (try and do a correspondence course for your ticket from a training institute?), and when we consider what the W.I.A. has done, I personally feel that in the interest of the Amateur Service as a whole, we as members of that body should do all we can to uplift rather than drag down and criticise an organisation which I feel is responsible for us retaining the frequencies which we have today.

Again I repeat, the W.I.A. has made provision for S.w.l's to exist and share the facilities, it is up to those S.w.l's themselves to provide a sub-organisation which will be of benefit to all, then and only then can we flourish. The country member is not able to participate, he has no voting power unless by proxy. He should be given the provision of a postal vote, so that he may have a say in elections, and one important matter, chaps, if an elected officer is not doing his job, a vote of no confidence will probably have him removed, if there is somebody to take his place. It can be done, in fact I've seen it at the only meeting I've attended, and in the interests of the Institute it is up to the S.w.l's themselves to make sure their office-bearers are doing their job.

Finally, for the country member, or the city member who needs a more exacting S.w.l. fellowship, I feel that as well as belonging to the W.I.A., membership in either the I.S.W.L. in London (35/- sterling per annum), and/or the Newark News Radio Club in New Jersey ($5 U.S.) would be of benefit.

I might add that I am not a member of the VK2 S.w.l. Group, however I am entitled to a S.w.l. listing, thus under the rules I use the number W1A-L2022. However, I am a member of the VK2 Div. and, as a vote of confidence, I intend to remain therein. I do utilise the facilities of the I.S.W.L., who have been of great assistance to us here in VK, and I believe I have been made a member of the N.N.R.C., as well as being a member of the Elizabeth A.R.C. in VK5. However, if this batch of notes appear a little longer than usual, 'tis nothing to do with my absorption with the writings of 5PS, rather 'tis due to the fact that we had no notes last month. I will hold the ladder over until next month, by which time all cards will have been cleared from the mail hold-up and we should have some fresh scores. 73, de Don L2022.

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VHF

Sub-Editor: CYRIL MAUDE, VK3ZCK
2 Clarendon St., Avondale Heights, Vic., 3034

V.H.F./U.H.F. OPERATORS PLEASE NOTE

Portable operation during Easter will be undertaken by Des VK5CU, Barry VK5ZMW and Eric VK5ZEJ, from a hill near Palmer, S.A., 35 miles on a bearing 80 degrees east of north from Adelaide. Hours of operation: Sat., 13th April, 1900-2200; Sun., 14th April, 0600-1000 and 1900-2200; Monday, 15th April, 0600-1000 hours, S.A.T.

144.090 Mc.: 100 watts to 10 element beam. Will call for three minutes on the hour on a.m., listen for two minutes. If no contact, will call on c.w. for three minutes commencing five minutes after hour, then listen for two minutes.

433.650 Mc.: 100 watts to stacked 8/8 skeleton slots. Commencing 15 minutes after hour S.A.T. Will call on a.m. for three minutes, then listen for two minutes. If no contact, will call for three minutes on c.w., commencing 20 minutes after hour, then listen for two minutes.

During above schedules aerials will be pointed on a line through Deniliquin, N.S.W., which is midway between Mt. Kosciusko (Keith VK-2ZVL) and Mt. Ginini near Canberra (Eddie VK1VP). Calls will also be made at other times beaming VK3, VK4 and VK7. Skeds may be arranged with distant stations on request. Contacts with any stations will be welcome as time and band conditions permit. Further information from Eric VK5ZEJ.

VICTORIA

Activity on the v.h.f. bands in the Melbourne area at least has been at a very low level. Over the Xmas period no exotic DX was worked. If it was, then those concerned did not advertise very well. On the equipment side of things, there appears to have been much activity in the workshop with a number of s.s.b. signals making their appearances on both 6 and 2 metres, and I am told about 25 stations are active on 432 Mc.

The V.h.f. Group's 6 metre converter sales far exceeded the Group's original plans by a factor of three and this has delayed the appearance of the 2 metre and 432 Mc. versions. Prototypes of both of these are working and by next month more details should be available. Anyone with suggestions for further projects are asked to write to the V.h.f. Converter Committee, P.O. Box 36, East Melbourne, 3002. Until May, 73, Cyril 3ZCK.

Eastern Zone, January.—50 Mc.: The season started off early with some good openings to ZL, VK2, 4, 5 and once to VK6 (Nov. 19, 23, 26, 27, 28, 29, 30, Dec. 3 and 4), then quiet until Christmas (Dec. 23, 24) and opened again over New Year (Jan. 2, 4, 5, 9, and 13). However, nothing unusual happened. No. VK1, 7, 8 or 9s heard, also no one logged the VK0 beacon in Gippsland. No short skip under 470 miles observed, hence no Es opening recorded on 2 metres.

144 Mc.: Consistent good openings to VK2, 5, and 7 throughout the season. The VK5VF beacon received strongly in the Morwell area on Dec. 8, Jan. 4 and 14. Morning of the 4th it was interesting to note that 45 minutes after the 5VF beacon faded out on 2 metres, the 6 mx band then opened up to Adelaide Es wise, hence nearly two propagation modes simultaneously—extended GW and ES! VK2ZEO and VK2BLR/2 were the only VK2s worked. Active zone stations are VKs 3ZAT, 3ZCG, 3ZDP, 3ZGA, 3ZNB, 3ZOS, 3ZSS—all are looking out for DX.

432 Mc.: Four or five stations are becoming interested and building gear, also we propose to build an a.t.v. station as a group project.

February—52 Mc.: No 6 mx openings observed in Gippsland, however the m.u.f. peaked above 34 Mc. to the north including Japan and U.S.A. on 22/1/68. M.u.f. also peaked up over 40 Mc. for several days between 11th to 16th (28-day cycle); watch the band around these dates over the next three months.

144 Mc.: Some good extended ground wave openings have occurred. VK2ZEO Deniliquin worked into Gippsland on 29th Jan.; same night we had for the first time excellent snow-free t.v. from ABSN8 Bega up to 2200 hours, not seen before or since. Sunday morning Feb. 4 we worked VKs 5ZLJ, 5CJ, 5ZKR, 5ZDR, 5HP at Mt. Gambier and worked VK5ZDR again on Feb. 13. 73, George VK3ZCG.

SOUTH AUSTRALIA

Since the completion of the Ross Hull V.h.f. Memorial Contest six metre activity has been very sparse. However, there have been numerous reports of JA signals heard on 50 Mc. during February, but as yet no signals have been heard or worked on 52 Mc.

Two metre activity on the other hand has been extremely high. Early in January, Mick VK5ZDR moved QTH temporarily to Tantanoola in the South East, approximately 15 miles north of Mt. Gambier. Mick reports that he has his 10 element long yagi firmly planted 70 feet high and running his usual 100 watts. Signals from Mick into Adelaide have been consistent and always readable 5 with signals approaching many decibels over strength 9 on most occasions. Supplementing the activity from South East areas are John 5HP, Col 5CJ and Col 5ZKR, who have also been putting very strong signals into the Adelaide area. The most notable opening of late on 2 metres was on Tuesday, Feb. 13, when many Adelaide stations worked into the Kaniva and Yanac areas of VK3. During the same evening the South East stations were working into Melbourne and Mick 5ZDR reports working 24 VK3s around that area. Also on Feb. 7 Mick worked VK7ZAH both ways on 2 mx for the first time from his new QTH, having worked previously twice from his old location.

Again an upsurge in 576 Mc. activity has occurred and an Australian record of approximately 145 miles is to be claimed by John 5QZ and Graham 5ZJL. John was located 17 miles south of Kingston and Graham at Mt. Barker in the Adelaide Hills. 16 element collinears were used at both ends and John 5QZ was using stabilised gear. Signals were R5 S8 both ways. Consequently, activity is high on 576 Mc. and it would appear that this record is bound to fall in months to come.

On 2nd Feb. the annual general meeting of the V.h.f. Group of South Australia was held, and the officers elected for the ensuing year were: Chairman, Eric 5ZEJ (re-elected); Vice-Chairman, Edwin 5ZTS; Sec.-Treas., John 5QZ; Councillors, Barry 5ZMW, Rick 5ZFQ. Extensive discussion was had on topics and projects for the coming year and the committee are presently formulating a programme to be followed. From all indications it appears likely that 1968 will be the greatest year ever for v.h.f. activity in VK5. 73, 5ZHJ.

NORTHERN TERRITORY

Barry VK8DI is running 30 watts a.m. on 52.3 Mc. to a 6 element beam. Mick VK8ZMR runs about 25 watts a.m. to a 5 element beam and is using commercial gear, ex U.S.A., and is v.f.o. controlled and usually nets on caller's frequency.

VK8AU has s.s.b. about 45 watts p.e.p., is located at Batchelor and is surrounded by tropical jungle. His QTH looks lousy, but seems to work okay. VK8ZEB is still building his gear with assistance from VK8ZMR. Doug VK8KK has moved from Alice Springs to Darwin and is not active at the moment. Jim VK8ZSJ, ex VK5ZSJ, has 6 watts to a 5/8 whip on 6 metres and 8 watts to a 3 element beam on 2 mx. The main activity has been JAs with a few VK4s and the Southern States. 73, Jim VK8ZSJ, ex VK5ZSJ.

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Correspondence

Any opinion expressed under this heading is the individual opinion of the writer and does not necessarily coincide with that of the Publishers.

AMATEUR RADIO STATION AT INTERNATIONAL CONFERENCE

Editor "A.R.," Dear Sir,

The following information is provided as a news item which you might pass on to our fellow Amateurs through the medium of your Amateur Radio journal or bulletins.

In April this year the 24th Session of ECAFE (Economic Commission of Asia and the Far East) will be held in Canberra, A.C.T. This is a very important International Conference and many top government officials will be present.

Eight technicians and myself as Project Manager will be handling the complete electronic side of the Conference for the company which employs us. The electronics include simultaneous interpretation equipment, tape recording, closed circuit television coverage and radio frequency paging.

Three of the technicians including myself have Amateur operator's licences and intend setting up an Amateur Station at the site of the Conference as a social recreation, for the technical team.

The Department of External Affairs will publish the details of the Conference Bulletin so that any delegates who are Amateur operators or interested in electronics may join in the social activity.

Because of the importance of the occasion, the call of VK1EC (Economic Commission) has been issued for the three weeks of the Conference.

Operation will be s.s.b. or a.m. mainly on 20 metres. Some operation will take place on 40 and 80 metres if sufficient interest is shown by VK stations.

Although not regarded as a new country or rare DX, all stations contacted will receive a QSL indicating the importance of the occasion and details of the operation.

Also we as the Amateur operators who will carry out the exercise, believe that because of the many overseas countries represented at the conference and the interest shown by the Commonwealth Department concerned, this is an opportunity too good to miss, to publicise our hobby and the international goodwill it fosters.

Please assist us by conveying this information to the Amateur fraternity by any means at your disposal.

—Dennis Wheaton, VK2AWW.

N.Z. ELECTRONICS CONVENTION

Editor "A.R.," Dear Sir,

As you may be aware another National Electronics Convention—Nelcon II.—is being held in Auckland this August. This convention will once again reach a high technical level and form a meeting place for electronics personnel from all branches of the industry. Previous experience has shown that these conferences are attended by research workers, designers, engineers, technicians and other enthusiasts from all branches of Government—D.S.I.R., Broadcasting, Post Office, Defence, Railways, Forestry, Civil Aviation, etc.—as well as Hospitals, Power Boards, Universities and assorted manufacturing and industrial concerns both working in electronics and employing it in their processes.

We enclose for your information copies of the first two circulars which contain details of papers, trade exhibition and enrolment. We would appreciate any publicity which you can give to this conference which last time drew 450 delegates and 80 papers.

We will ensure that future circulars are sent to you and assure you that any further information can be obtained from the writer.

Thanking you in anticipation of your assistance,

—Robin H. E. Beckett,
Publicity Officer.

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CONTEST CALENDAR

6th/7th April: "CQ" W.P.X. Phone Contest (s.s.b. only).
11th/12th May: 17th OZ-CCA Contest (c.w. only).
6th/7th July: "Summer" Top Band Contest (R.S.G.B.).
12th/13th October: 21/28 Mc. Phone Contest (R.S.G.B.).
26th/27th October: 7 Mc. Phone Contest.
7th/10th November: 7 Mc. C.w. Contest.

V.H.F. CONVENTION

THE SOUTH EAST RADIO GROUP OF VK5

invite you to their

1968 CONVENTION at

MT. GAMBIER

SAT., SUN. and MON., 8th, 9th and 10th JUNE, 1968

Further details in May "A.R." and in Divisional Broadcasts

BOOKS OF INTEREST FOR AMATEUR OPERATORS

★ A.R.R.L. — **THE RADIO AMATEUR'S HANDBOOK** — 45th Ed., 1968 Edition .... **Price $6.10 Posted**
The standard reference work and text for everyone—Hams, Experimenters, Students, Engineers, Laboratory Men, Technicians.

★ ORR — **THE RADIO HANDBOOK** — 17th Edition .... **Price $13.45 Posted**
Tells how to design, build and operate the latest types of Amateur Transmitters, Receivers, Transceivers and Amplifiers.

★ STONER & EARNSHAW — **THE RADIO TRANSISTOR HANDBOOK** .. .. **Price $6.65 Posted**
This up-to-date Handbook covers a wide range of communication for both Amateur Radio and Commercial Applications.

★ A.R.R.L. — **THE RADIO AMATEUR'S V.H.F. MANUAL** .. .. **Price $3.00 Posted**

★ A.R.R.L. — **UNDERSTANDING AMATEUR RADIO** .... **Price $3.00 Posted**

★ A.R.R.L. — **THE A.R.R.L. ANTENNA BOOK** .... **Price $3.00 Posted**

★ A.R.R.L. — **SINGLE SIDEBAND FOR THE RADIO AMATEUR** .. .. **Price $3.73 Posted**

★ A.R.R.L. — **THE MOBILE MANUAL FOR RADIO AMATEURS** .. .. **Price $3.73 Posted**

★ A.R.R.L. — **THE RADIO AMATEUR'S LICENSE MANUAL** .... **Price 85c Posted**

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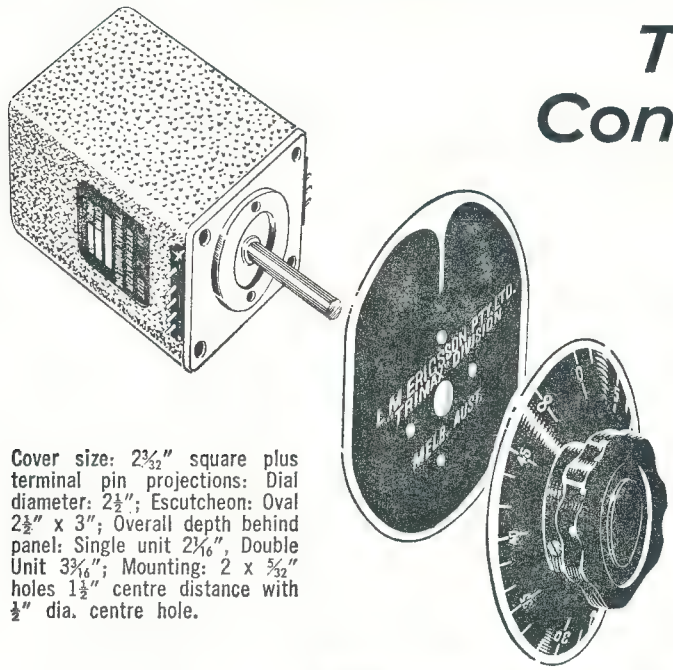

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FEDERAL AND DIVISIONAL MONTHLY NEWS REPORTS

(SEND CORRESPONDENCE DIRECT TO DIVISIONAL REPORTER NAMED AT PARA. END)

FEDERAL

LICENSED AMATEURS

Following are figures for November 1967:—

	Full	Limit.	Total
VK1	74	18	92
VK2	1321	404	1725
VK3	1122	530	1652
VK4	470	184	654
VK5	490	222	712
VK6	284	131	415
VK7	132	79	211
VK8	19	6	25
VK9	64	13	77
VK0	8	0	8
Totals	3984	1587	5571

W.I.A. POSTAL MOTION 1/67

All Divisions have indicated an AYE vote to this motion. Accordingly, the W.I.A. Federal Contest Committee will be maintained by the Western Australian Division for the ensuing year, 1968-9, contrary to W.I.A. policy that this committee be maintained by each Division in tri-annual rotation.

INCORPORATION OF THE Q'LAND DIVISION

In the Public Notices section of the Brisbane Courier-Mail for January 24, 1968, a formal notice has been inserted advertising the intention of VK4 Division to become a Company. The Divisional Secretary, Alan Simpson, indicates that their efforts to become incorporated are almost completed, so this action will pave the way for adoption of the new Federal Constitution as then all Divisions will be incorporated societies and able to become members of the Federal Company.

FEDERAL CONVENTION AGENDA

Motion sheets are being prepared and should be in the hands of Divisions early in March. Motions were received from all Divisions, and any further matters will have to be raised as General Business items as the deadline for receipt by F.E. has passed.

OVERSEAS MORSE REQUIREMENTS

Following the reduction in Morse speed requirements for Australian Amateurs, it may be of interest to note conditions existing in overseas countries (Receiving Tests):—

U.K.—Receive 36 words (5 letters/word) in plain language in three minutes, and 10 five-figure groups in 1½ minutes; more than four errors in plain language and more than two in the figures will result in failure.

U.S.A.—Examinations for General, Advanced and Extra classes of Amateur licence are conducted by an F.C.C. engineer. Exams. for all Novice, Technician and Conditional classes are conducted under F.C.C. procedures by a volunteer supervisor (holder of General class or higher licence is usual) in the field. F.C.C. code examinations are given by machine, volunteer examiners mostly use hand sending. The applicant is required to send and receive, at the specified speed for one minute out of a five minute test without any error.

Europe.—Countries with 12 w.p.m.: Germany, Finland, Netherlands and Norway. Sweden is 16 w.p.m., and France, Switzerland are 10 w.p.m., the latter with a five-minute test and a maximum of three mistakes. (It need not be pointed out that I.T.U. headquarters is in Switzerland!)

AMATEUR OPERATION IN INDONESIA

The Minister for External Affairs, The Hon. Paul Hasluck, recently replied to a query regarding this matter. The Australian Embassy in Djakarta informed the Minister that the Indonesian Government law prohibiting Amateur Radio operation is still in force—it is described by an Indonesian representative of Djakarta Amateur Radio operators as "an old order law". He felt that the Indonesian Communications Council would be prepared to seek the withdrawal of the law and has undertaken to approach the Communications Council.

A.R.R.L. has informed us that on 30th December, 1967, General Soeharto signed a decree authorising Amateur Radio. It is understood that in a couple of months the Indonesian Government will notify I.T.U. that it no longer objects to Amateur Radio communications and that the ban can be lifted. There are several "amateur" groups in Indonesia, and currently two of these are showing signs of making application to I.A.R.U. for membership. Which of these is the proper outfit is at this time somewhat indeterminate!

Australian Amateurs are reminded of para. 78 of the "Handbook" which would seem to preclude communication with Indonesian Amateurs until such time as the P.M.G's Dept. has been notified by I.T.U. that the position which has existed for some years has been formally and officially altered.

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FEDERAL QSL BUREAU

The following changes in the A.R.R.L. QSL Bureau list have been notified:—

W1—Hampden County Radio Assn., Box 216, Forest Park Station, Springfield, Mass., 01108.

W4 and K4—H. L. Parrish, K4HXF, RFD 5, Box 804, Hickory, N.C., 28601. (Cards for WA4, WB4 and WN4 continue to go to WA4WIP as before.)

KP4—Mrs. Alicia G. Rodrigues, KP4CL, Box 1061, San Juan, Puerto Rico, 00902.

The new QSL manager for the Canberra Radio Club, Box 1173, Canberra City, A.C.T., is Andrew Davis, VK1DA.

Boys Town Amateur Radio Society, WA0OGI, Boys Town, Nebraska, 68010, U.S.A., advises that Father Flanagan's Boys Home celebrated its 50th year during 1967 and the Club Station issued 500 Golden QSL cards to all stations who QSLed us in 1967. However, due to poor equipment and no set operating times, very few of these cards went to DX stations. In order to give any DX station a chance to work them and receive a special award, they will operate at the following times and dates: 14.270, 2400 GMT to 0600 GMT; 21.405, 1900 GMT to 2130 GMT, Feb. 25, Mar. 3, 10, 17. For each QSLed contact they will return one of the awards.

Tubby Vale, VK8NO, ex VK5NO, advises that he has not kept the best health of late and the doctor has ordered him back south. This move may take a few weeks to become effective. VK8UG will continue in operation on 100 per cent. phone basis.

—Ray Jones, VK3RJ, Manager.

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FEDERAL AWARDS

DXCC NOTES

The following operations were listed by the A.R.R.L. during 1967 as being unacceptable for DXCC Credit. As the W.I.A. DXCC is based upon the A.R.R.L. list, no credit will be given locally.

K1IMP/KC4—Navassa Is.
PY0XA—St. Peter and St. Paul's Rocks.
VK2ADY/0—Heard Is.
VU2WNV—Laccadive Is.
VQ9AA/C—Chagos.
IA6SBO—Bishop's Rock.
IB9WNV—Blenheim Reef.

An addition to the Countries List is Farquahar. Farquahar, formerly one of the Seychelles, is now one of the islands making up the British Indian Ocean Territory. Contacts made with Amateur stations on Farquahar, November 10, 1965, or later, will be counted as separate from the rest of the Seychelles.

SILENT KEYS

It is with deep regret that we record the passing of the following Amateurs:

VK2SE—Bert Wright.
VK2AGK—Alf Girling.
VK3CD—J. Rich-Phillips.
VK3NB—A. F. Nickson.
VK3TI—Charles Godden.

NEW AWARDS MANAGER

The Federal Awards Manager is now Geoff Wilson, VK3AMK, and any applications for DXCC, VHFCC, WAS (VHF), or WAVKCA should be sent to him direct at:—

7 Norman Avenue,
Frankston, Vic., 3199.

DXCC listing changes should also be forwarded to the same address.

Sufficient postage to cover return of cards must be enclosed with application.

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NEW SOUTH WALES

FEBRUARY MONTHLY MEETING

The meeting was held at Wireless Institute Centre on the 23rd and was opened by President-Chairman, Keith Finney, VK2KJ. After the usual formality of reading the previous minutes new members were admitted and approved and welcomed to the W.I.A.

President Keith then gave the customary report of Council activity in which he drew attention to the renovations to the building and the re-decorating which is most impressive.

Continuing, Keith drew members' attention to the Conventions being held over Easter and appealed to members to attend and assist the Division and the W.I.A. to make this historic event a complete success. He went on to mention the new Handbook of Regulations now available from the Divisional office, the P.M.G., and the Equipment Store. Keith concluded by saying that ALL members should have a copy and carefully read it.

Chairman Keith advised that the March meeting would be the Annual General Meeting and election of Council would take place then. The election would not be at the April meeting as announced earlier.

The March meeting would also contain the Annual Report of Council in which answers to some contentious items and current rumours would be given. A clear statement of the Council's policy would be given with recommendations for the incoming Council.

Concluding the report, Keith advised that renewals of subs. were over 800 already and the new cards were arriving at the rate of 50 a day. By the way, have you sent yours in?

Four lecturettes were the evening's entertainment, the first on early Gramophones complete with a demonstration was given by Ivan Agar, VK2AIM; the second on Antennas by Hans Ruckert, VK2AOU, proved very interesting. The third was a description with biased slides of the team of Burtoft and Molen on going to a mountain for the National Field Day. The trials, tribulations and joy in such an exercise left the audience cautious of mountain operation, but no doubt interested in going mobile, portable, etc.

The last lecture was given by Sid Molen on "getting back 93 per cent. of QSL cards". Quite a humourous talk, supported by verse, no actual proof of the method doubtful in itself was presented. There will be no lecture at the March meeting and the April lecture was not confirmed at the time of writing.

A visitor to the meeting was Al K7LWE, of Seattle, on R. & R. leave after having been wounded in Vietnam. Al told many stories of that do which can only be described as incredible. Chris VK2ZDD escorted Al to the Gosford field day where he was well taken care of Amateur style. 73, Stan VK2ZRD.

HUNTER BRANCH

In the usual true democratic fashion, the annual election of officers of the Branch was held on Friday, 1st March, when a small but enthusiastic audience was present. The Divisional President, Keith 2KJ, was there to see that no unworthy practices took place and, since the whole procedure was over in a matter of less time than it takes to write it down, he could hardly do otherwise. The Patron of course remains as Frank 2APO, but there has been a considerable reshuffle in the other positions. The President this year is Rodney 2CN and it is indeed good to see a new member of the executive. The retiring President, Frank 2ZFX, who did such a good job in organisation of both committee and general meetings during the year, has found it impossible to continue in the top place, but he has agreed to continue in the vice-presidential

position with his colleague as Bill 2XT. Both Treasurer and Secretary remain unchanged, Gordon 2ZSG and Len 2ZFD being the capable men to fill these posts. Zone Correspondent is again Keith 2AKX with Joe 2ZJO to assist. The v.h.f. liaison officer's post is ably filled by Mac 2ZMO while Bill 2ZWM remains social secretary and Stan 2AYL is QSL manager. But here the similarity with last year ends. Two new committees have been formed to deal with broadcasts and publicity and another for activities. Activities committee members are Tony 2ZCT, John 2ZJG and Bill 2ZWM, while on broadcasts and publicity there are Stan 2AYL, Keith 2AKX and associate member Neville Threlfo.

The thanks of all Branch members go to Frank and his 1967 team for a job well done and best wishes are extended to the incoming executive for a successful and interesting year in 1968.

Bill 2XT reports sensational increases in signal reports since he lifted the beam (umbrella type) to the top of the 70-foot mast at the Coal Point house. At the same time, Allen 2KB must have decided on some modifications or additions since his aerial suffered the buffeting in the recent gales. As for Bill 2ZL, his aerial is resplendent with various hanging wires at present in an attempt, so he says, to find where it is resonant. It seems that this is the price one must pay for owning s.s.b. gear.

Probably the smallest but highest gain aerial of the month is that built by Tony 2ZCT who used it for the 432 Mc. fox hunt at Gosford. It is cunningly mounted through the roof vent hole in the Rommel wagon. And to show that ordinary 80 metre dipoles are still the delight of some, Bruce Morley, our keen associate from Toronto, has constructed one just such for receiving purposes. The two glistening poles which support this fine edifice are nearly as much a landmark in Toronto as those of Jim the DX man. And as for Paddy 2AXU, not only did he get on the air again this month, he even is talking of putting up an aerial also, much to the delight of his mates on 80. The poles for the rather hush hush design have come from the home of John 2XQ who is moving house to Hamilton.

Other than the AGM, probably the most popular event of the month has been the well known Gosford Field Day. In the experience of some this has yet to be rivalled by any such event in Australia and certainly some of those that get a three-page spread in the R.S.G.B. Bulletin (sorry there, Communication) are no better than our local do.

Some have been complaining about the scarcity of contacts on v.h.f. of late and most likely the criticism is justified, since, if it reflected as a general thing on 146, then there's nobody on! It is to be hoped that the inauguration of the new activities committee will make the difference needed to get things going again. Broadcasts too have suffered some revision with the elimination, for a trial period, of all callbacks. However, the station signing 2AWX will be on the air 15 minutes before the broadcast with requests for reports. It is to be hoped that the events which dogged the broadcast on the last February Monday will not recur, since these resulted in a complete absence of signal outside the shack—which wasn't a good thing.

In case you've forgotten, the Branch meetings are held each first Friday of the month in the Clegg Building, Room 6, at Newcastle Tech. College, Tighes Hill, and the commencement time is 8 o'clock, in the evening of course. Perhaps you'll consider coming along to the next one which is, depending on your mailman, either 5th April or 3rd May. Either way, you are assured of a good night's instruction, gossip or whatever and you'll meet no end of people you haven't seen for years including that bloke who has the very same problem as yourself or even myself—in my case, money. So see you there, 73, 2AKX.

CENTRAL COAST RADIO CLUB

The Gosford Field Day was held on Sunday, 25th Feb. Ideal weather helped to make the day an outstanding success, with attendance of over 300.

The feature of the day was the 432 Mc. mobile fox hunt, attracting a field of eight competitors. This is believed to be the first time a 432 Mc. hunt has been held and judging by the enthusiastic support, will certainly not be the last.

The following is a list of prize winners: Mobile Scramble, H.f.—1st, Les 2RJ; 2nd, Harold 2AAH; 3rd, Noel 2ASQ. V.h.f.—1st, Vic 2ZCF; 2nd, Dave 2AWZ; 3rd, Paul 2ZPJ. 146 f.m.—1st, 2ZSA; 2nd, Bob 2ASZ; 3rd, Paul 2ZPG. 7 Mc. Fox Hunt—1st, Bill 2ZCV; 2nd, Dick 2ZCF; 3rd, Harold 2AAH. 144 Mc. Ped. Fox Hunt—1st, Bob 2ASZ; 2nd, Peter (from Lawson); 3rd, Colin 2BCC. 432 Mc.—1st, Harold 2AAH; 2nd, Dave 2AWZ; 3rd, Mac 2ZIM. 144 Mc. Long Distance—1st, Bob 2ASZ; 2nd, Les 2RJ; 3rd, Mac 2ZIM. 144 Mc. Ped. Fox Hunt—1st, Leon Skeers; 2nd, Colin 2BCC; 3rd, Peter (Lawson). Ham Quiz—1st, Paul 2ZPJ; 2nd, A. Wyatt; 3rd, Keith 2AKX. Ladies Quiz—1st, Mrs. Richmond; 2nd, Betty Gerdes; 3rd, Jean Williams. Ladies' Scavenger Hunt—1st, Jean Williams 14/20; 2nd, Patricia Skeers; 3rd, Mrs. E. Agar. Home-brew Equipment—Large, 2AJJ, deltahet rx; small, P. J. Charlton, 7 and 14 Mc. sniffer; most original, Florence Bertoff. Prize for longest distance—Al K7WLE, on leave from Vietnam.

Acknowledgments: Ampex, A & R, Mico, Mullard, M.S.P., W.I.A., Adcola, Rola, Ducon, Tech. Book Co., E.E.B., Electronic Parts, Miniwatt, Pye, Warburton Franki, Sydney, Sideband Eng., Aust. Electronics Hobart, Mosman T.V., G.E.S., 2RU, 2AXS. 73, Bill 2TS.

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OBITUARY

CHARLES GODDEN, VK3TI

Charles passed away on 1st February, 1968, aged 61 years. He had not enjoyed the best of health for some years and recently retired from active work, and at the time of his death he was employed part-time at broadcast station 3MA.

Charles was first licensed in May 1937 and remained active throughout the period right up until his death.

During the war he served with the group M, The Australian Special Unit A.I.F. Wireless, and was discharged with the rank of Warrant Officer II. Returning to Mildura after discharge, he continued in the radio service business up to his retirement.

Charles was also active on and off on all bands including a short spasm on 2 metres. He also held broadcast operators certificate of proficiency and from time to time did part-time work with the local broadcasting station 3MA.

We, the Mildura Group, extend our deepest sympathy to his wife and four sons.

VICTORIA

The following agenda items have been selected for the remainder of the year for the monthly general meeting nights:

April—Antennae.
May—Annual Meeting and White Elephant Night.
June—S.s.b. Construction.
July—Baluns.
August—The Megamatch.
September—S.s.b. Linears.
October—Whip Antennae.
November—Portable Equipment.
December—Transistors.

The speakers selected are all specialists in their field and interesting evenings are assured.

PRESENTATION OF MERIT AWARD TO VK3ATN

Presentation of A.R.R.L. Technical Merit Award to Ray Naughton, VK3ATN. The presentation was made by Mr. E. J. Wilkinson, of the P.M.G's Department. Mr. Max Hull, VK3ZS, looks on. For story see "A.R." December 1967.

EASTERN ZONE

Our Zone held their get together picnic on 4th Feb. at the Moondarra Dam, and a pleasant day was spent by all. Stan 3ZPL was control station and portable stations were set up by Stan 3ZAB, George 3ZCG and John 3AED.

The A.O.L.C.P. class got away with a good start on Feb. 19, with 18 attending, and the next week (Feb. 26) attendance increased to 22. David 3ZOZ is the first lecturer, and will be followed by Lee 3ZSS, Trevor 3ZGA, George 3ZCG, and Stan 3ZPL, with others assisting. This class will run each Monday evening at the Women's Aux. R.S.L. Hall, Morwell.

3ZAT is now working down in Melbourne so we are sorry to lose you, Aud, and we all wish you the best in your new career. However, looks as though we will gain a new member, John 3AAA (triple "A"), hopes to transfer from Colac to Yallourn around June. Also, Peter 3ZWW makes frequent visits to Bairnsdale, operating mobile and from Bairnsdale on Ch. A f.m. Barry 3ZQC, Mirboo North, over the next three or four months, will be working in the Orbost and Eildon areas. Rod 3UG (ex 0CR) is now living back in Gippsland and working at Warragul.

The Eastern Zone Convention will be held over the week-end of April 20 and 21, near Mirboo North, at the Gippsland Educational Hostel, 2 miles out along Thorpdale Road. Build up a 2 mx snooper to track down the hidden transmitter. We welcome visitors and short wave listeners, so for further details please write to our Secretary, 3ZAB, 10 Chenhall Cres., Traralgon, or phone the President, Morwell 43953. See you all at the Convention. 73, George 3ZCG.

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QUEENSLAND

IPSWICH AND DISTRICT RADIO CLUB

Once again we must report a very active month, climaxed by the club's participation in the John Moyle Memorial Field Day. A beautiful location was chosen about 2 miles from Mt. Crosby, high and over looking Ipswich some 10 miles away, and it proved to be excellent for reception and transmission, all bands from 3.5 Mc. to 52 Mc. were used and a great number of contacts were made for a total of some 500 points. We learnt a lot from our experience which we hope to apply to our next Field Day. A humorous interlude at the Field Day was when a passing motorist stopped and came over to see what all the people were doing, and politely asked when the land sale was to start—his comment almost started a land slide!

The club membership is on the increase once again and we would like to extend a welcome to three new members—Ralph 4JZ, Roy 4ZRM and Max 4ZMV. We are all pleased to have you in the club chaps; another recent member to our A.O.C.P. class is Allan, who lives at Mt. Glorious and attends our classes each Thursday night and has a mighty long drive home after class. Hope our instructor does not keep you in after class Allan, it might be hard to explain to the XYL.

Six metre DX is coming in now and one member Alex 4QT seems to be getting his share of JAs. I believe he worked 10 on his way home from work and eventually went QRT with a real pile up calling him. If this keeps up, our QSL manager Bill will be sending large batches of QSL cards to the JA Bureau.

The club house now sports a set of front steps and they take some getting used to. We have not had them before so now we are planning an official opening in the near future, perhaps a set of railings will be next before the official opening to keep all the celebrating members from falling off the landing.

The long awaited get together with the Bundaberg Club was held at Borumba Dam near Gympie, and about 12 club members made the trip up to the Dam. Seven cars went up, operating 6 mx mobile en route, and an enjoyable time was had with the Bundaberg troops. The area about the Dam was very scenic and we had a visit from Andrew 4AT on the Sunday. The members from Bundaberg present were Roy 4ZWR and Geoff 4GI, also Bob 4UD. It appears 4ZRW was also present but no one actually had an eyeball contact with said gent.

Members of our club included Ron 4RG, Dave 4HW, John 4ZJE, George 4ZLG and yours truly 4GT, also s.w.l. Tom who slept in his car and was walking some 2 feet lower for some time on Sunday until he was able to straighten out. Activities included a fox hunt and a screening of club films. We are looking forward to another outing on similar lines with the Bundaberg Club. We all missed Rusty 4JM at the get together and hope he is not

missing his appendix too much and will be back on his feet again soon.

We have welcomed back an absent club member, namely Bob 8JR, who will be staying with us only a short time as he takes up a new posting in VK2 in April—nice to see you back again Bob.

Well chaps, enough for this month, see you all again next month. 73, Warren 4GT.

CENTRAL QUEENSLAND BRANCH

Some considerable time has elapsed since the activities of the Central Queensland Branch have been chronicled in print, but endeavours will be made to ensure regular contribution of news during the forthcoming year.

The annual general meeting of the Branch was held on 16th Feb. at the Clubroom in Quay St., Rockhampton, with a splendid attendance of members. The President, Mr. F. Nolan, 4FN, delivered an excellent report on activities during the year, wherein mention was made on the sound financial position, the consistent support at social and club gatherings, and general keen interest shown by all members in Amateur Radio.

Election of officers for the ensuing 1968 year resulted in the following members being appointed as main office-bearers: President, H. Hobler, 4DO; Vice-Presidents, F. Nolan, 4FN, and R. Greenwood, 4NG; Secretary, C. Bennetts, 4ZBG; Asst. Secretary, F. Roden, 4ZFR; Treasurer, G. Fox, 4FK; Publicity, L. Merrill, 4ZIM.

During the past few months, we have been fortunate in meeting and welcoming many VK visitors to Rockhampton—I bring to mind 8ZMR (Mike of Darwin), 3ZZS (Philip of Ballarat), 4QW, 4ZPL, 4ZFF, 4ZGJ, 4ZMG, 4ZDN, 4UD and also 9AG (Arnold of Rabaul), to mention a few. Some of these gents had an impression that Rockhampton was rather quiet (radio-wise) but a CQ on 6 mx brought forth so many replies that the resultant dog-pile took some sorting out! So all you visiting VKs, please note that a CQ on 53.032 (or anywhere in the band, for that matter) will produce results here in Rocky!

Regular participants in the VK4 Sunday morning W.I.A. hook-up are Hal 4DO and Geoff 4FK, who keep the Rockhampton's group name to the forefront. Mention should be made about 4DO's new linear final for "the thing"—a recent acquisition which is gaining him more DX than ever! And Geoff 4FK who has been seen around the village in a new car—looks like ornithology will be ousting Ham Radio! Report has it that Silas 4SB has his s.s.b. device all ready, but receiver troubles are now the problem—maybe soon we'll hear him on air! It has been reported that Joe 4CL has been hospitalised for some time, but is making progress—best wishes to you from the group for a return to good health.

Activities of the v.h.f. group are at the usual high level. New call signs during the year have swelled the ranks and the 6 mx band is really populated in this area. An early morning (0700) group flourishes on 53.032 for a quick QSO before departure to various "salt mines". Regular fox hunts for the mobile gents are held, and good attendances are recorded each time; driving force behind these events is Lyle 4ZLD, whose organisational ability and enthusiasm deserves special mention.

During the recent southern DX season, it was noticed that the local 6 mx gents were right "with it"! Hardly an opening occurred but that the gang were there in strength—old stagers Lance 4ZAZ and Bob 4NG showed the lads how to rattle up QSOs, but one must say that Frank 4ZFR, Doug 4ZDK, Lyle 4ZLD, Gordon 4ZGA and Lyndsay 4ZIM were well to the forefront. A glance at the various log books shows the keenness of the group, with a varied galaxy of call signs including 9ZAK of Moresby!

With the advent of the early openings to JA land this month (Feb.), the beams have swung north and once again the regulars are working into JA practically every day. Some good openings have occurred and QSO tallies are mounting—one keen character has passed the 60 mark since 10th Feb., I'm told! Considerable activity in the region down to 46 Mc. has been noted, with f.m., r.t.t.y., and t.v. signals from eastern sources a commonplace logging—at strength to R9 plus 20, quite often.

In closing this month's news, we must make mention of our country members—John 4NZ of Mount Morgan, a member of the well known 40 mx early a.m. group, and Don 4ZFB, the gent from Biloela who thinks nothing of driving 90 miles each way to attend club meetings. Don rejoices in an 80 ft. tower plus yagi beam on 6 mx and, judging by his JA QSO tally, will rate as "Don-san" soon!

And a final word to any visiting Amateur. C.Q.B. members would like to meet you, call CQ on 53.032 or use the 600 ohm system to an office-bearer—you will be made welcome. That's the lot for the moment. 73, Lyndsay 4ZIM.

TOWNSVILLE AND DISTRICT

Although this will appear in the April notes, please do not think it is the usual joke as no notes have been sent for the last three months. The reason being that the writer has been away once again on his usual yearly jaunt to the southern climes, as the XYL says, to beat the heat in Sunny Nth. Qld. What a joke that was. With the sweltering heat I experienced in Victoria and South Australia!

This time I forgot to take along the call book and was unable to ring the chaps as usual. As I remember them all as Tom, Dick, Harry, etc., I did try to remember the initials of the famous scribe from South Australia, but there were too many PARSON's in the phone book, so offer my humble apologies.

In the local press there was quite an article on "Pirate Radio Russian Style", which really made the hackles rise as the poor old Amateur came in for all the blame. As we really know that the Amateur in the U.S.S.R. really has an extra stiff exam. to pass and seems proud of his ticket and the Amateur would not be operating outside his own bands.

What with the postal trouble in sending mail, I was unable to let the boys in Sydney know of my arrival and missed out in seeing them. On my return to the Sunny North, I found that old Sol had covered his face and was weeping, ever so much, that there were floods everywhere and over 50 inches of rain was recorded in ever so many days, wettest for 90 years. The southern climes are still in the throes of drought (Feb. 27) at the time of writing, and that there heat beats all past records.

The local club got away to a fine start in this new year with many promises to try and get the local club building under way. The Z boys are still working the 52 Mc. band into Japan and the Southern States, but nary a break through to KH6 or ZL boys. DX is appearing for the others in the 14, 21 Mc. bands although I find it hard to hear any on 28 Mc. The trip to the far northern boys did not eventuate because of the flooded nature of the highways, so see you boys perhaps in the Tourist Season. 73, Bob 4RW.

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SOUTH AUSTRALIA

The February meeting of the VK5 Division, which was a joint Annual General Meeting and a Monthly General Meeting, was held to a very good roll-up of members and visitors, a very good sign of the their enthusiasm because this type of monthly meeting has very little to attract a good attendance, although for some reason or other the Feb. meeting has always been noted for a good roll-up. Very little can be written about this type of meeting except to say that a lot of questions were asked and answered, a few grievances were aired, and a few pats on the back were bestowed, much to everybody's satisfaction.

Whilst on the subject of annual general meetings, there was a good attendance of members at the VHF AGM, 36 to be exact, and the President for the coming year, Eric 5ZEJ, and the Secretary, John 5QZ, must have been more than satisfied with the opening of the new administrative year.

It was surprising the number of members at the Divisional meeting who queried the absence of any Divisional notes in the Feb. issue of "A.R." despite the fact that for more years than I care to remember, this issue of the magazine has never carried Divisional notes, due I think to the fact that the printers take their holidays in January and the magazine therefore has to be printed so far ahead that no notes are possible. Anyway, it is good to see that the notes were missed, apparently we have a few readers here and there.

Heard on the grapevine that Rupe 7RM will be visiting VK5 over the Easter period, and no doubt will renew many old friendships, and no doubt note the many gaps in our ranks since he was a member of the Division.

A number of VK5 associate members, who are keen s.w.l's, are not very happy at the moment with what they get out of the membership in the W.I.A. This question of what to do for the s.w.l. member of the W.I.A. has always been hard to answer, most s.w.l. members join the W.I.A. and eventually become licensed, but the confirmed s.w.l. becomes a different matter when it comes to providing him an outlet for his hobby, which after all is just as important to him as any other section of the Division. Several times some enthusiast has attempted to form an S.w.l. Group but after a while the enthusiasm wanes and everything settles back into the doldrums. Being small in number, the s.w.l. undoubtedly has a genuine grizzle on a number of matters, most of which never get heard because of the said small numbers.

Talking of s.w.l's, I notice that Ernie Luff, WIA-L2245, recently received an Honorary Saskatoon Award from Canada, and he claims to be the only one in the world to receive it. Incidentally, if anybody is interested in doing anything for the s.w.l. within the Division, have a chat with him as to just how much the s.w.l. gets out of membership in the W.I.A., plus a few grizzles on the lack of awards available in VK to the s.w.l.

By the way, if perhaps any reader of these notes feels at times that the world is against him or that he is getting a raw deal from life, I would suggest that he take time out to read the story of Richard WN6YUB in the January issue of "QST" (page 57). Deprived of three important senses—sight, speech and hearing—he passed the F.C.C. exam. at the age of 23 years, and his story should be an inspiration to us all to stop grumbling, get to work and move ahead.

The first meeting of the associate members of the VK5 Division for 1968 was quite a success and speaks volumes for the work put in by the organiser, Wayne Kitchener. In view of the fact that it was close to the approaching P.M.G. examination, the main item for the night was "The Amateur Radio Operator's Certificate" and members were able to ask any questions on this subject. John 5UL and Geoff 5TY answered the questions to everybody's satisfaction, and all in all the meeting was a huge success.

Harry 5MY, our close-fisted Treasurer, is at the moment of writing on the high seas en route to Pago-Pago, and from all accounts is having the time of his life. This area is no stranger to Harry and the XYL, if my memory serves me right, their last vacation was taken either here or Suva. What it is to be in the spondulics!!

Son of Geoff 5TY was recently accepted as a junior associate. This is a good idea to increase the membership of the Division, but just what does Geoff think of the QRM growing up within the four walls of his QTH? Probably he is too busy with W.I.A. matters to care.

Col 5CY, from Balaclava, was sighted in the city on holidays recently, and if rumour is correct, he has joined the ranks of the idle rich. He will be more or less knocking off to carry bricks, because he will be playing around with radio as an Amateur instead of working on radio, etc., as a vocation.

Brian 5BI is reported on the re-building racket once again. This joker never seems to stand still for a minute and will start re-building at the drop of a hat. No news of the Admiral lately Brian?

VK5 has never had a YL operator for very long periods, the only one I remember was Betty Geisler from Murray Bridge, and I don't think she was very active after she passed her 1st Class Commercial. Anyway, if all is to be believed, it won't be long before this position is remedied as my spies tell me that Lorraine Earl, from Mallala, is a keen addict at the Amateur hobby and will one day vacate the s.w.l. ranks to sit for the ticket. Good work, Lorraine, you will never regret the effort.

Max 5OF not very active these summer days, in fact Amateur Radio has taken second place to that of the art of yachting, an art at which I am led to believe he excels. If he cares to take me for a sail any time I will be only too pleased to stand on the front and signal every time we turn round the corners!

Talking of sailors, those two intrepid adventurers, Carl 5SS and Frank 5MZ, recently went up to Murray Bridge and boarded the paddle steamer Avoca and sailed all the way to Tailem Bend, and in one afternoon at that! The occasion was the picnic organised by a section of the Electricity Trust of S.A. (E.T.S.A. to you) and a good time was had by all, with plenty of cups of tea made with the famous Murray water, and a potent brew it certainly was, with an aroma that could be heard and smelt for miles. So much so that Carl put a few days in bed with a septic throat on the following week and whilst no nasturtions will be made, Carl is at the moment right off tea, with or without the famous Murray water.

Alan 5DU was another daredevil on board the Avoca who sampled a cup or two of the famous brew that laid Carl low. He has been heard on 7 Mc. of late with quite a strong signal at my QTH.

Occasionally one bumps into a couple of the boys who live in close proximity to each other and cannot seem to work together very harmoniously as to their air time. Then again there will be three or more in the same boat and they all work in perfect harmony as to their air time, as is evidenced by Ken 5IM. This joker has a sked with a couple of rascals in VK2 around 5-6 p.m., and come rain or shine, always manages to sign off at the right time to permit another well known sked in the area to start on time. This is the spirit that makes for good relations in our hobby.

I notice that Allen 5FD is now the State Secretary of the VK5 Youth Radio Scheme following the State Convention held at Elizabeth on the holiday week-end of January. A similar convention has been arranged to be held in June following the National Convention to be held in VK3.

Uncle Tom 5TL was sleeping the sleep of the pure and innocent the other early morning when the telephone disturbed his slumbers. When he answered the call, it was from the police to inform him that a window had been found open at the Glenelg Post Office and they would like him to rendezvous with them and check the premises. Tom, at the unearthly hour of 1.30 a.m., set sail for Glenelg and with the police made a thorough check of the premises, returning empty handed at about 2.30 a.m., much to his XYLs disgust at the disturbed night's sleep. He reacted in a somewhat coarse manner to my query as to whether he had a listen on the receiver upon his return from the post office. No dedication, that's the trouble!

My little paragraph last month regarding the credit alongside the name of Geoff 5TY must have inspired his Man Friday, because the same magic word appeared at a later date alongside the name of Treva 5ZIS. I also noted the name of Uncle Tom 5TL in the pass list, and when one compares the ages, this is as good as a credit to him.

Notice that the W.I.C.E.N. Group are holding a Scavenger Hunt instead of the usual Fox Hunt this month—nothing like variety they say. I suppose if I want to find out just what is the difference I will have to attend, but I don't. The word scavenger seems too close to home!!

Jack 5LR has at last completely settled in at the new QTH at Victor Harbour, and applied the last brush of paint on the front door this week. The last six to eight months have been very busy months for him, and also the XYL, Flo, and they are both entitled to sit back and take pride in their efforts. He has been on the air a little with a piece of wire dangling on the nearby fence, worked a little DX at that, but will now have more time to concentrate on the bands.

Had a card during the Xmas season from Jack 5JD who is still sailing the seven seas as a radio op., and sounds as happy as a lark in the process. He sends his 73 to those who may still remember him and hopes the VK5 Division is still as strong as ever.

Noticed Johnny 5KO getting quite a mention in the R.S.G.B. Bulletin recently for his work on the "top band", and the list of contacts were certainly impressive, especially as his contact with VQ8CCR, of Rodriguez Island, gave him his 160 mx W.B.E., certainly the first known one by a VK, and congratulations are in order.

Uncle Tom 5TL recently had just completed a contact with a VK2 on c.w. when Freddie 5FH called him and asked him to report his telephone out of order. No idea when the service was restored, but Freddie had been spending a lot of time washing up following the announcement of his daughter's engagement and the subsequent number of callers. Sounds like the telephone must have run hot, but anyway Freddie reckons that c.w. is still the best after all, as he had to use it to get his phone working!

John 5YA is off on a 2-year trip to Nauru in the near future and it was announced at the meeting that he was keen to borrow a transmitter, etc., for the period, in order to keep in touch with home sweet home.

I notice that the winner of the W.I.C.E.N. scavenger hunt, mentioned earlier, was none other than John 1ZDZ/5 who apparently was home for a period. Barry 5ZMW was second, and equal third were Phil 5NN and Murray 5ZQ. Quite a good roll-up and although more work has to be put into the preparation for the hunt than is required for a fox hunt, it would seem that the change was appreciated by all.

Incidentally, the young son of Geoff 5TY christened Murray, and now a junior associate member, was well to the fore at the hunt, and with Tom 5TL in the driving seat, probably formed the youngest and oldest operational crew.

Bob 5ZDX and Treva 5ZIS were recently put on to some maintenance work due to a strike where they work. Imagine their feelings when half way through the said maintenance, to find the strike called off, but no chance of start for the men. It seems reasonable to think that the maintenance was bustled along a little.

Well, this month has been a bad month for news gathering, in fact I never remember it so bad. I listened on all bands, but very little activity in VK5, probably the heat and no inclination to go into the shack. Here's hoping next month will be better—if not I will be out of business—and VK4 and VK6, plus Ye Ed. will be overjoyed! 73, de 5PS—PanSy to you.

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WESTERN AUSTRALIA

It is pleasing to be able to report that the attendance at our meetings each month has maintained the general trend and is creeping ever upward. The last couple of meetings strained the seating capacity to the utmost. Seems as though the present time and place is convenient for most members, and judging by the extremely poor response by country members to the questionnaire in the local Bulletin, a change is not indicated at present.

Remember the disposal sale way back at the January meeting? Well, one of the items auctioned off was a thirty-foot tower complete with beam. The purchaser was an American visitor to our sunny shore who was due to depart the aforementioned shores within several days. For some strange reason, shipping and airline companies tend to look askance at passengers toting thirty-foot towers among their personal belongings, hence our friend reluctantly stepped aboard the transport without so much as the co-ax. concealed on his person. To make a long story even longer, Dale kindly donated his purchase back to the Institute! This is about where we came in isn't it? However, it was decided by those present at the February meeting, that tower and beam be removed from its present site at Bayswater and be re-erected at Sunset Home. Great interest in Amateur Radio has been awakened in a number of patients at the Home, due almost entirely to Bill 6WY and his small band of helpers. There have been two demonstrations of Amateur Radio in action, each being somewhat handicapped by lack of an efficient antenna. It is hoped that with a little bit of encouragement and instruction, there will soon be another station on the air from VK6.

News to hand indicates that Tom 6TR has kindly offered a home for the v.h.f. beacon to be set up at Mt. Barker. Things are really getting under way down South.

Jack 6BU and John 6GB have been noted doing their bit toward keeping the 80 metre band "habitated" during the evening hours.

Heard an unusual sound on 40 the other Sunday morning. Turned out to be Bob 6BT. When challenged about the unusually large amount of carrier and that extra sideband, Bob ruefully admitted that he was on "ancient modulation", his sideband rig having "blowed up". However this sad state of affairs has its brighter side because Bob intends to build a new rig, amid the ruins of the old, so to speak. Heavy commitments at the salt mine may disrupt Bob's appearance on the band for some little time.

What do you think of the new Handbook? One thing is for sure, its bright cover is certainly more attractive than the sombre grey of its predecessor. Makes quite interesting reading, too, particularly when consumed with the appropriate comments as published over the last few months in "A.R." The new Morse requirements seem to have stirred up a good deal of activity in some quarters, too!

Don't forget to book in for the Kalgoorlie Hamfest on the long week-end early in June. It promises to be bigger and better than the last one. From then on its over to you Narrogin X-group. 73, Ross 6DA.

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Stockists of Radio and Electronic Components for the Amateur Constructor and Hobbyist

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430 Elizabeth St., Melbourne. Ph. 34-6539

HAMADS

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FOR SALE: Complete Amateur Station, VK2IW (Fred Borchardj. Best offer. Write to Les Hauck, P.O. Box 110, Broken Hill, N.S.W. Phone 2411.

FOR SALE: Four Oregon Masts, 70 feet high, complete with guy wires and aerial wire. All in perfect condition. No reasonable offer refused. W. A. Humphrey, 4 Cairossie Ave., Montmorency, Vic.

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FOR SALE: Galaxy V. Transceiver and power supply, with remote VFO, VOX, crysal calibrator, and tape recorder; $550 the lot. Will also sell as separate items if necessary. VK3AXL, J. A. Ferguson, 594 Plenty Rd., East Preston, Vic., 3072. (No phone)

FOR SALE: Hallicrafters HT37 Transmitter, Dow Key antenna relay, etc., $300. Eddystone 888A Receiver as new, $180. Trio JR-60 Receiver, 14 tubes, d/conv., inc. 144-148 Mc. band, new, $130. Pye Reporter on 53.032, 12v. also ext. 240 supply, $30. 144 Mc. Conv., 3-tube, xtal i.f. 3 Mc., $12. FL1000 Linear Amplifier, $220. All gear very clean and little used with instruction books. Ian McCosker, P.O. Box 299, Moree, N.S.W. Phone 1060.

FOR SALE: 14AVQ 10-40 meter Antenna plus 30 feet of co-ax., F.O.R., $33. Triband Quad Kit, F.O.R., $24. VK2YN, J. Watt-Bright, Colden St., Picton, N.S.W., 2571.

SELL: Eddystone 750 Receiver, perfect condition, as new, $95. P.O. Box 64, Stawell, Vic. Will deliver to Melbourne or suburbs.

WANTED: Ham Band Receiver in good condition for SSB—Collins 75S1, 2, 3 or similar. Will travel to inspect if in Melb. or about same radius from Stawell. Condition, price, to VK3UZ, P.O. Box 64, Stawell, Vic.

SELL: World famous HRO-60 Communications Receiver. 1.7 Mc. to 30 Mc. and 10-foot band spread all Ham bands. Designed for USB/LSB/AM/CW reception. Built-in 100 Kc. and 1,000 Kc. crystal calibrator. Complete with built-in power supply, 10 watt amplifier and external 10 inch loudspeaker. Cost $1,350, will accept $700. Phone Melbourne 787-1407 A.H.

SELL: H.R.O. Senior Communications Receiver. 1.7 Mc. to 30 Mc. general coverage, crystal filter and BFO. Completely re-aligned. Complete with power supply and loudspeaker. $120. Phone Melbourne 787-1408 A.H.

SELL: Swan 120, professionally modified for 80-40-20 with power supply and PTT mic., $195. "QST" July 65 to June 67, $5. VK3LK, P.O. Box 21, Coleraine, Vic.

WANTED: Comm. Rcvr., suit SSB, AM, etc. Full coverage or Amateur only. Up to $200 offered for clean set. Send full details to S. Widgery, 181 Victoria St., Ballarat, Vic., 3350.

WANTED: Small 80 mx AM rig, mobile or AC, suitable car or caravan—12v. or 230v. VK3AVU, Phone 288-2785 (Melb.).

WANTED: SX117, FR100, FR100B, SR700A. Price and particulars to P. Rodukoff, 21 Derby St., Hawthorne, 4171, Brisbane. Phone 95-4765. Sell: AR7, SX28, HE30. All good order.

A LARGE RANGE OF TRANSMITTERS, RECEIVERS, TEST GEAR, AND DISPOSALS RADIO PARTS AVAILABLE

- **CRYSTAL CALIBRATOR No. 10**

  Nominal Frequency Range: 550 Kc. to 30 Mc. Internal 500 Kc. crystal. VFO frequency coverage: 250-500 Kc. 2 Kc. dial divisions.

  Used (good condition): **$10.50.**
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- **MILLER 8903B PRE-WIRED I.F. STRIPS**

  455 Kc. centre frequency, 55 db. gain. Employs two PNP transistors and diode detector.

  Price **$9.50.**

- **EICO 753 TRI-BAND S.S.B. TRANSCEIVER**

  Full CW-AM-SSB coverage, 80-40-20 metres. 180w. PEP SSB-CW. VOX-PTT-ALC. 10 Kc. Receiver offset tuning.

  Kit **$328.78**, Wired **$428.78**.

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Communication Receivers, Test Equipment, etc. Call, write or phone Equipment inspected and picked up at your convenience any night or week-end.

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  807—70 cents ea.
  815—70 cents ea.
  6AC7—20 cents ea. or 12 for $2.
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  6CQ6—20 cents ea. or 6 for $1.
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  VR105/30—75 cents ea. or 3 for $2.
  QB2/250 (813)—$7 ea.
  TZ40—75 cents ea.
  6H6 (Metal)—20 cents ea.
  DM71 (Indicator Tube)—40c ea. or 6 for $2.

- **TRANSISTORS**

  2SC73
  2SD65
  2T65
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  All at Bargain Price of **25 cents each.**

- **STAR SR700 SSB AMATEUR BAND RECEIVER**

  Frequency coverage: 3.4-29.7 Mc. in 7 bands. Triple conversion, employs xtal locked 1st and 3rd conversion oscillators. Selectable USB or LSB. Selectivity variable, 0.5 Kc. to 4 Kc. 1 Kc. dial calibration. Three stages double locked geared dial mechanism, 30 Kc. per turn tuning rate. Vackar oscillator employed in VFO for maximum stability.

  Price **$461.50**.

- **A111 9 Mc. SSB EXCITER**

  A fibre-glass printed circuit board, the finest German crystal filter, diode ring modulator, and solid state circuitry all contribute to make the A111 the finest SSB Exciter available. Specifications: Sideband suppression, 80 db.; carrier sup., 65 db.; audio freq. response, 350 to 3,000 cycles; mic. input, 1 mV. on 5K ohm load. Incorporates VOX amplifier and relay amplifier.

  Price with KVG **XF9B** Filter, **$120**.

- **A112 5 Mc. VFO**

  Frequency coverage: 4950 to 5550 Kc. Frequency stability better than 100 c/s. over 12 hours long term; better than 8 c/s. over 10 minutes if enclosed in suitable box. Output: 350 mV. on 220 ohm load.

  Price **$22**.

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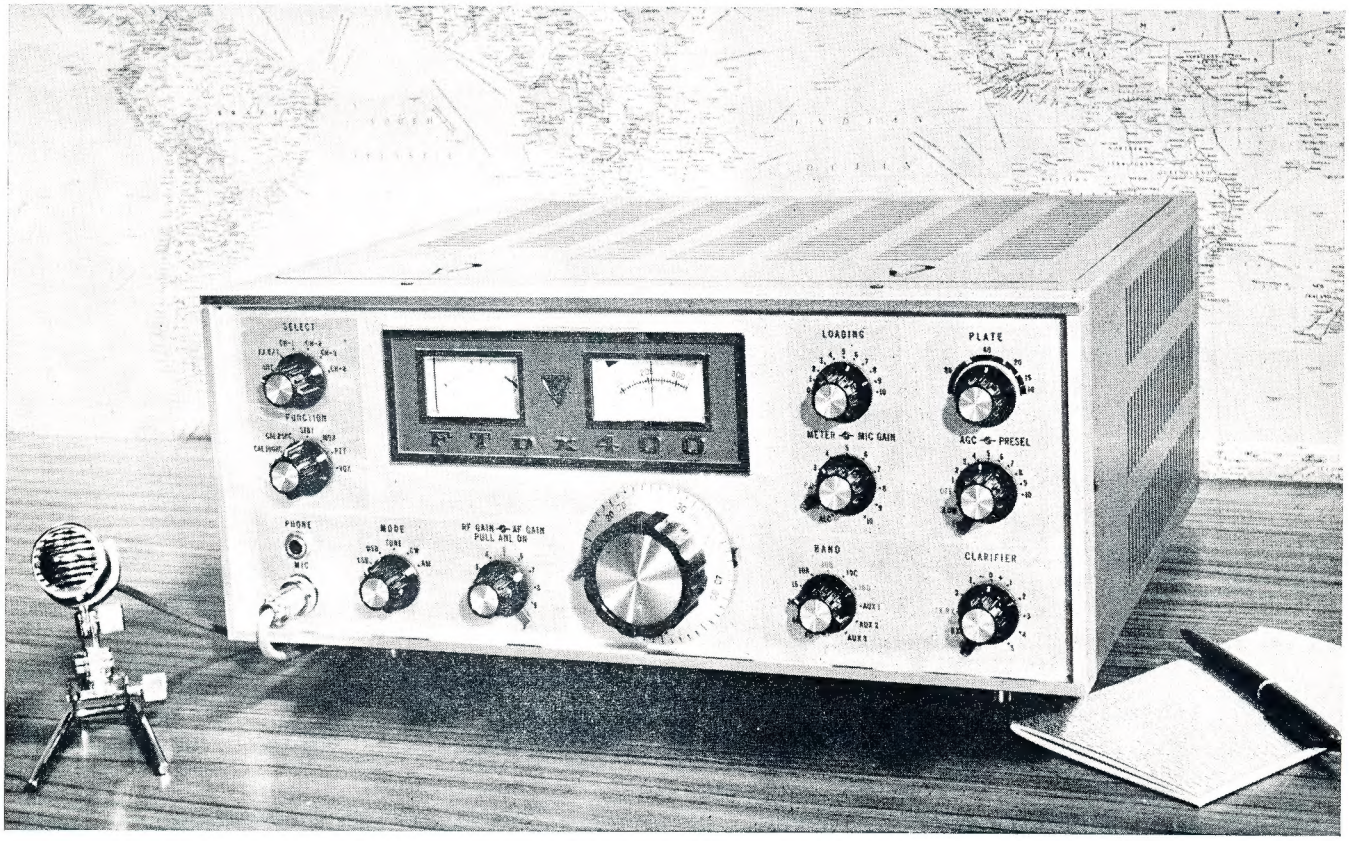

YAESU

NEW MODEL TRANSCEIVER – FTDX-400

— THE "EXTRAS" ARE STANDARD EQUIPMENT —

COMPARE THE FEATURES:

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- ★ A powerful 400 watts (500 watts speech peak SSB input).
- ★ Power Supply built in, 230v. 50 cycles AC (no extra charge!).
- ★ Selectable USB/LSB, CW and AM, normal or break-in keying.
- ★ VOX is included, as well as PTT and panel control.
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- ★ Sidetone CW monitor.
- ★ Multi-scale panel meter, fully calibrated, provides direct reading of PA current, plus relative power output, ALC indication, Rx "S" units.
- ★ Offset tuning, plus or minus 5 kc. is provided by clarifier control, which is selectable Off, Rx, Rx and Tx.
- ★ VFO dial readout of 1 kc.
- ★ Provision for external VFO for split frequency operation, plus built-in four crystal locked channel facility.
- ★ Adjustable VFO tuning knob tension.
- ★ Fast and slow selectable receiver AGC.
- ★ All plugs, circuit and instruction manual provided.
- ★ PTT microphone included—free.
- ★ Superbly neat construction, very accessible for servicing.
- ★ Solid, charcoal blue cabinet with lift-off lid, 15¾ x 6¼ x 13¾ inches. Matt finish aluminium panel.
- ★ 18 valves, 9 transistors and 33 diodes.

Now compare the value! All this for only **$690**, including S.T.

FOR PRESTIGE PERFORMANCE — CHOOSE YAESU

Also available: Matching speakers, HY-Gain antennas, Kyoritsu SWR meters, co-ax. connectors, LP filters, spare valves for Yaesu equipment, PTT microphones. Prices and specs. subject to changes. Write for illustrated leaflets.

Australian Agents: **BAIL ELECTRONIC SERVICES**

60 Shannon St., Box Hill North, Vic., 3129. Phone 89-2213

Rep. for N.E. N.S.W.:
MOSMAN RADIO SERVICES
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